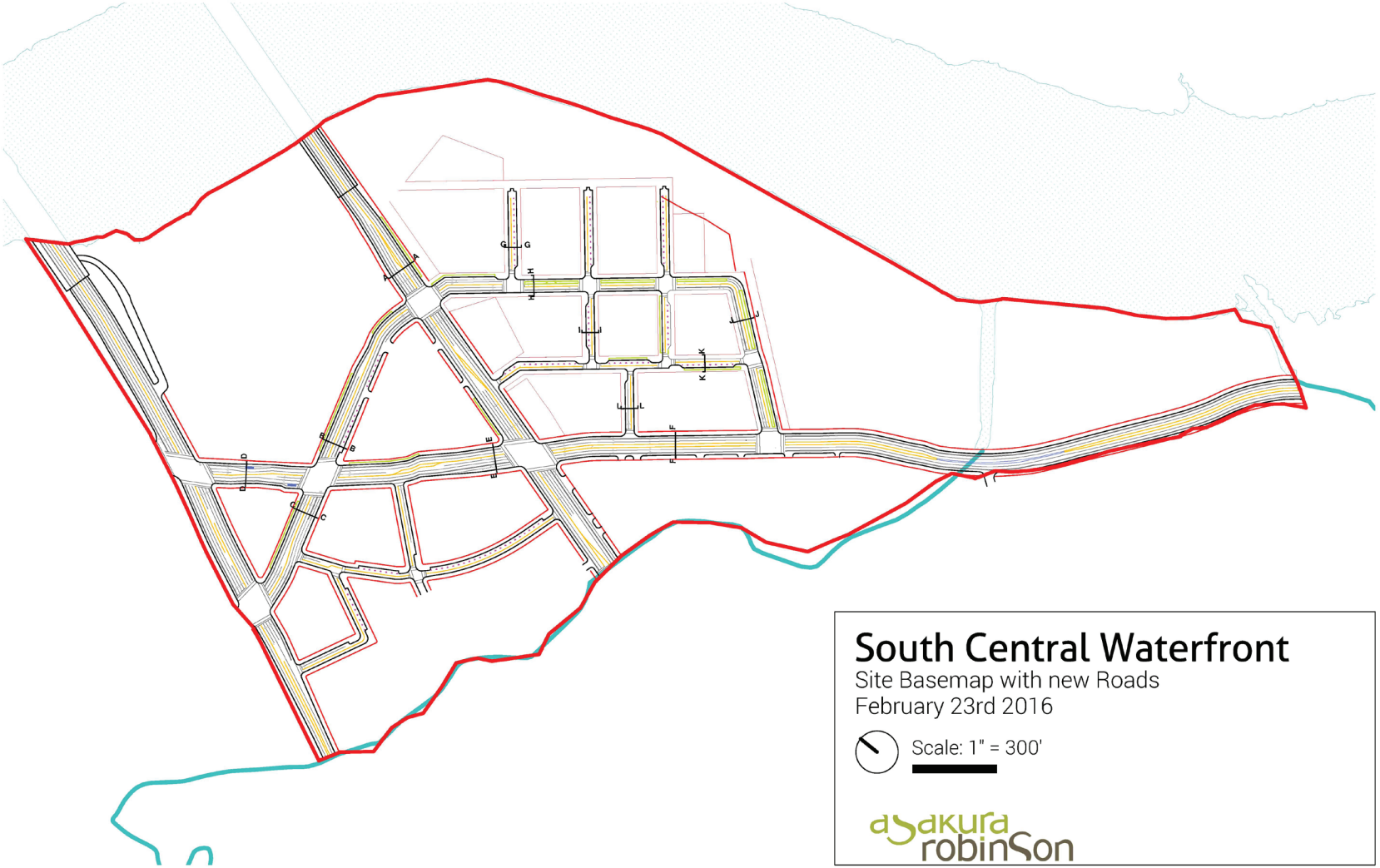
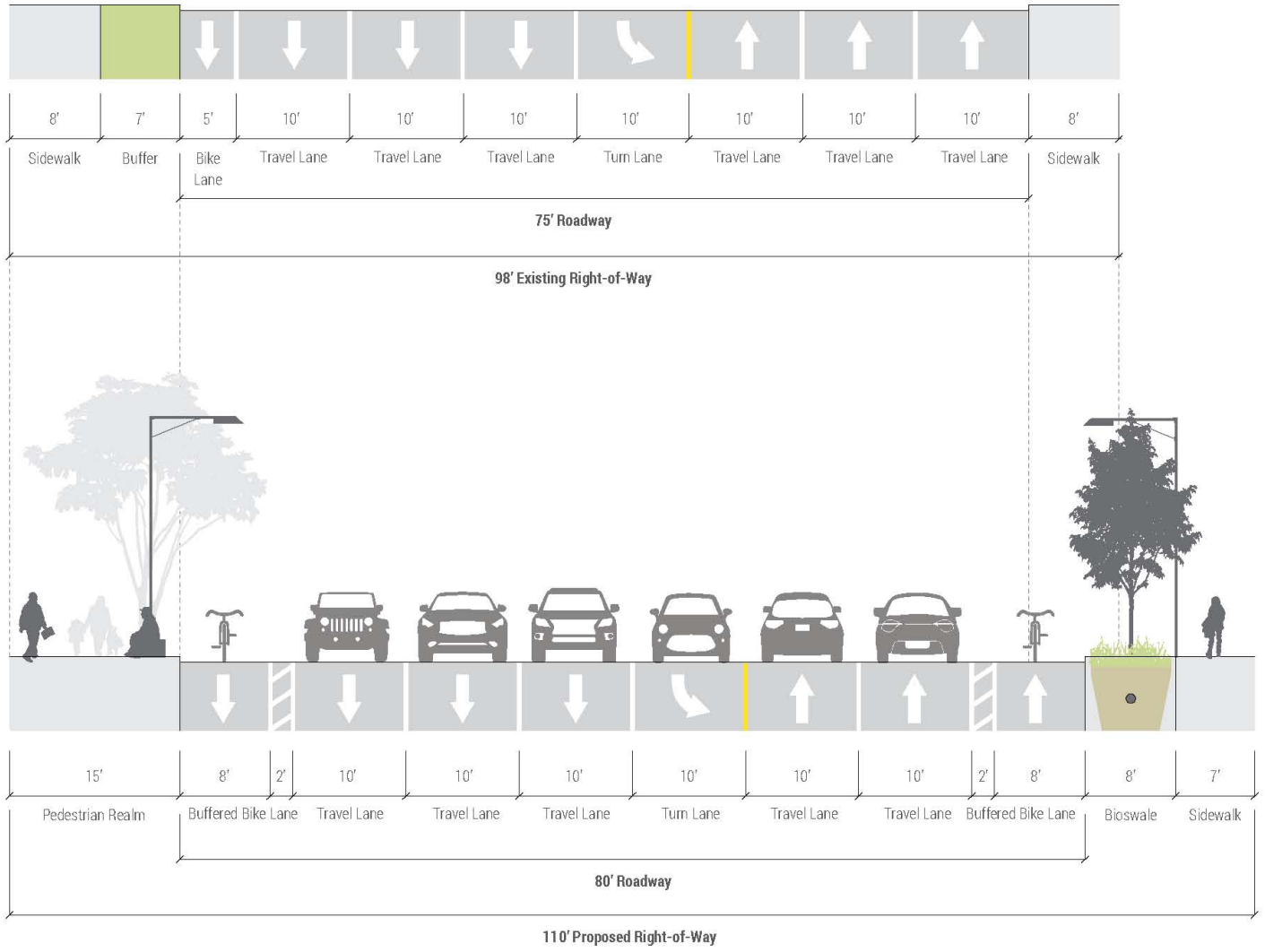
Appendices

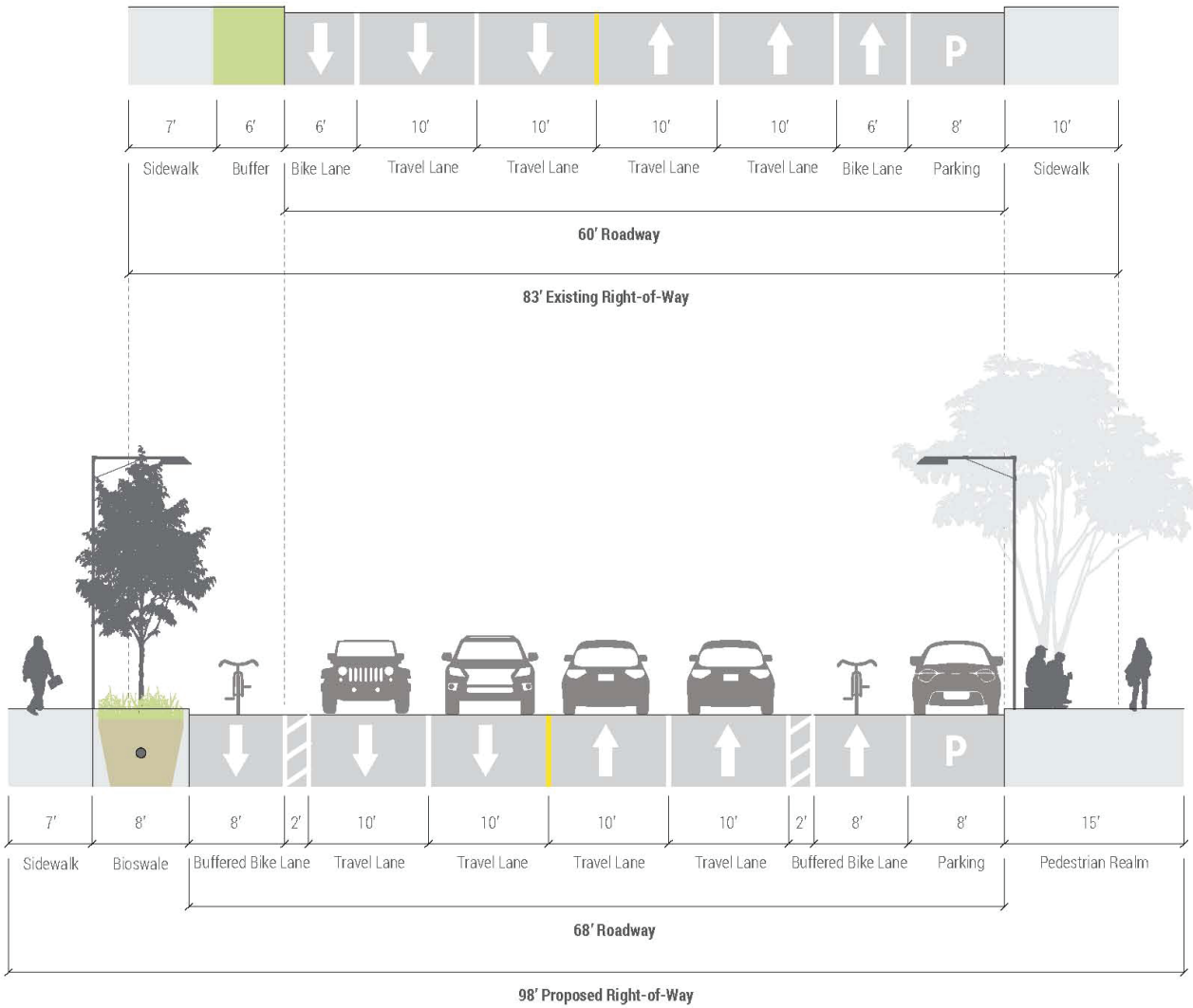
I. Street Sections



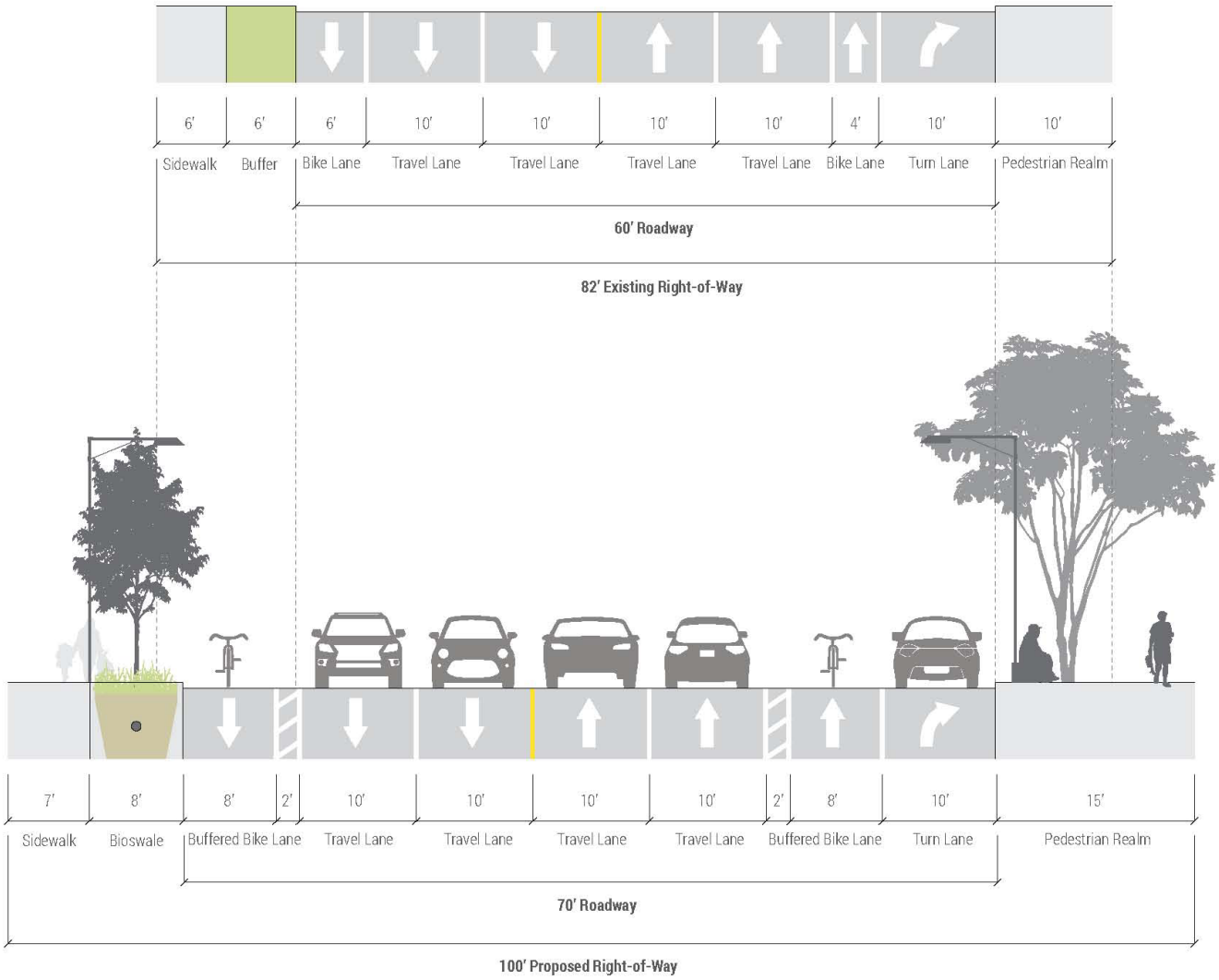
Appendix



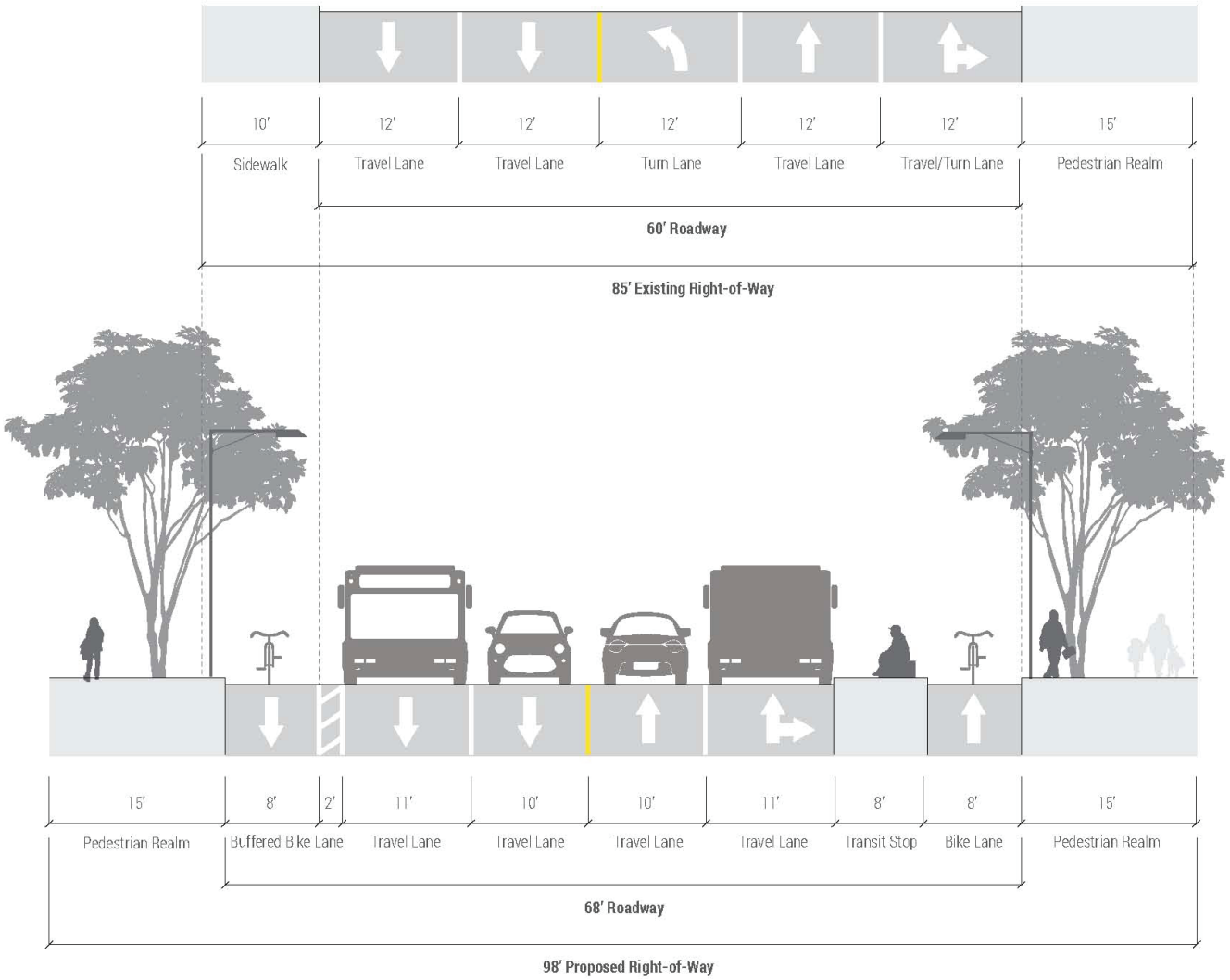
Section A - Congress Avenue



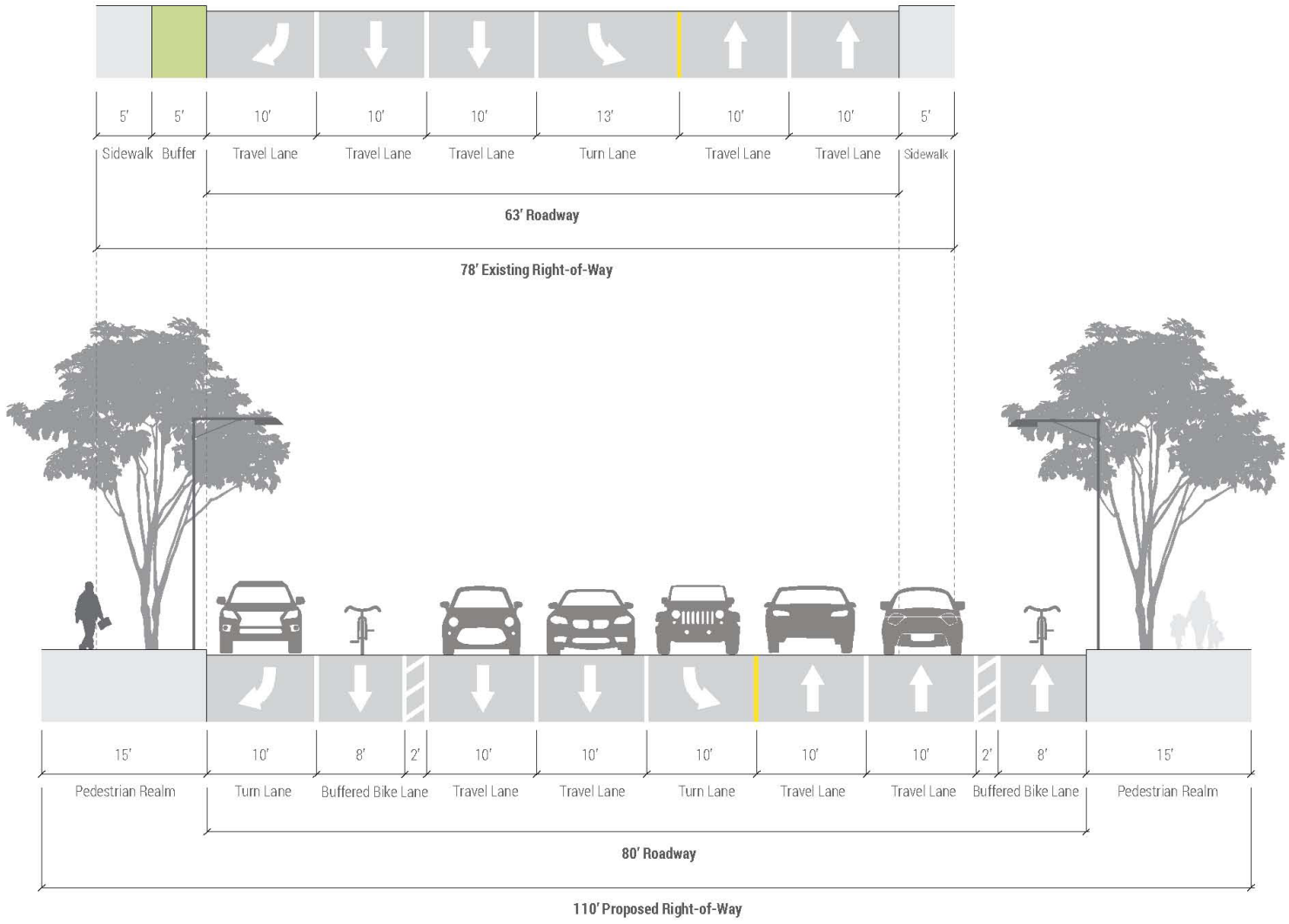
Section B - Barton Springs Road (1)



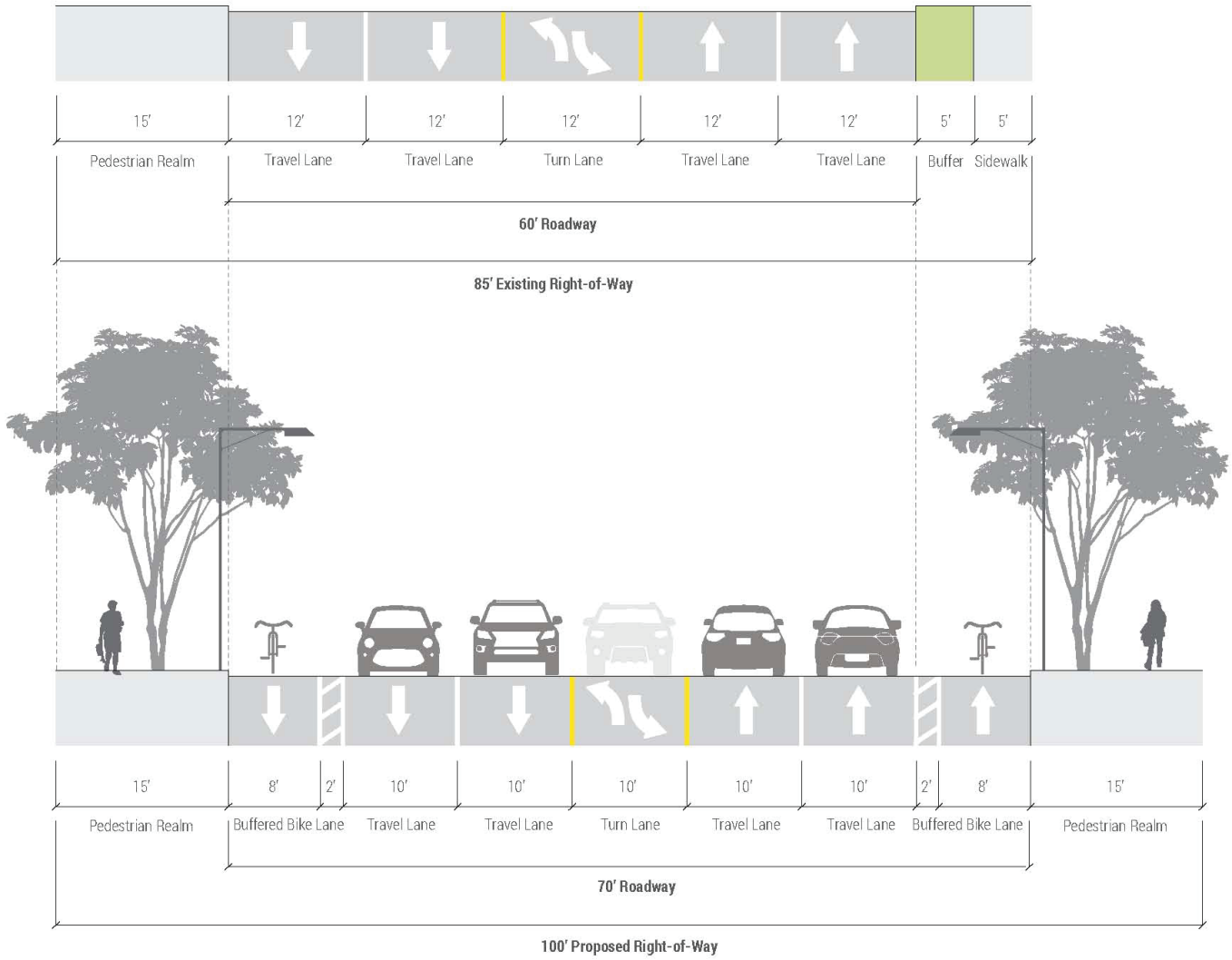
Section C - Barton Springs Road (2)



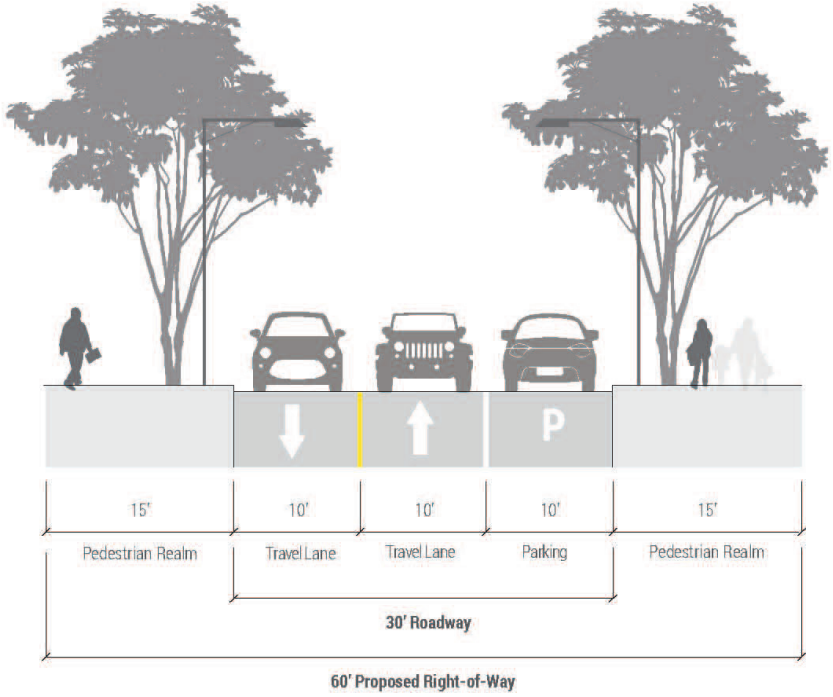
D - West Riverside Drive (1)



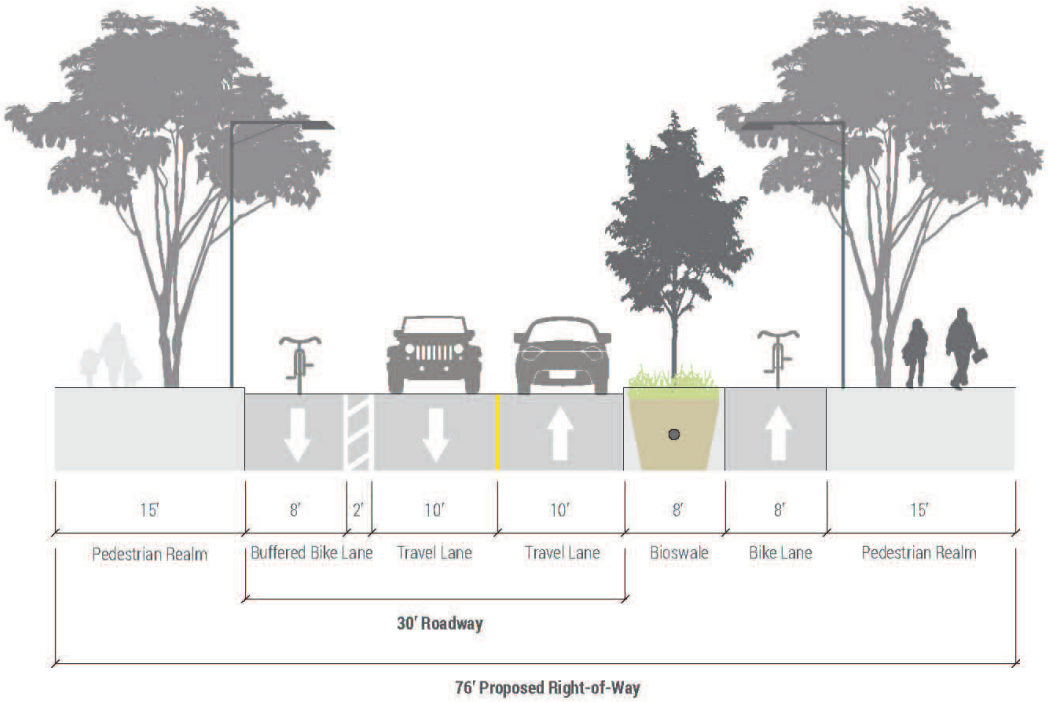
Section E - West Riverside Drive (2)



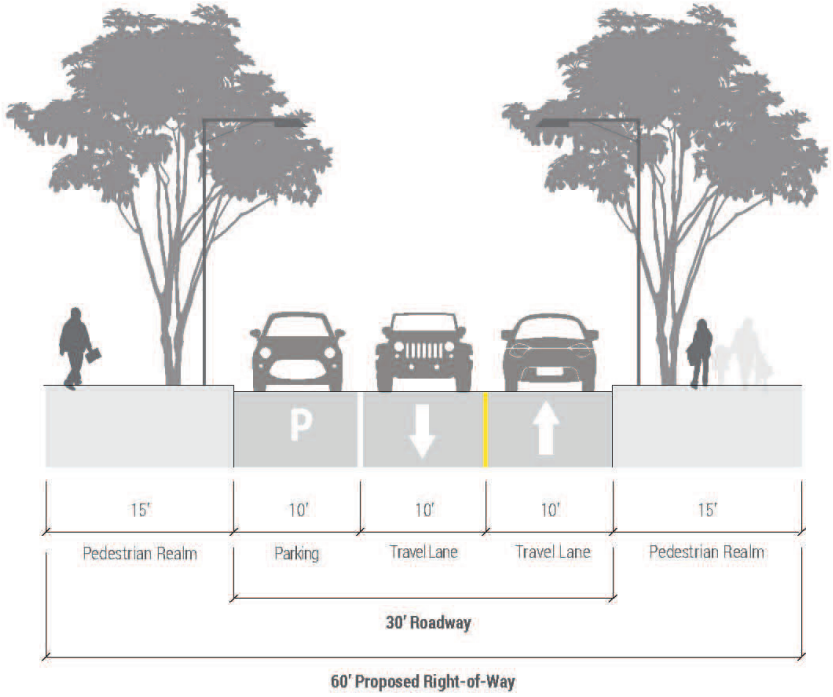
Section F - East Riverside Drive


P
15'
10'
10'
10'
15'
Pedestrian Realm
Travel Lane
Travel Lane
Parking
Pedestrian Realm
30' Roadway
60' Proposed Right-of-Way

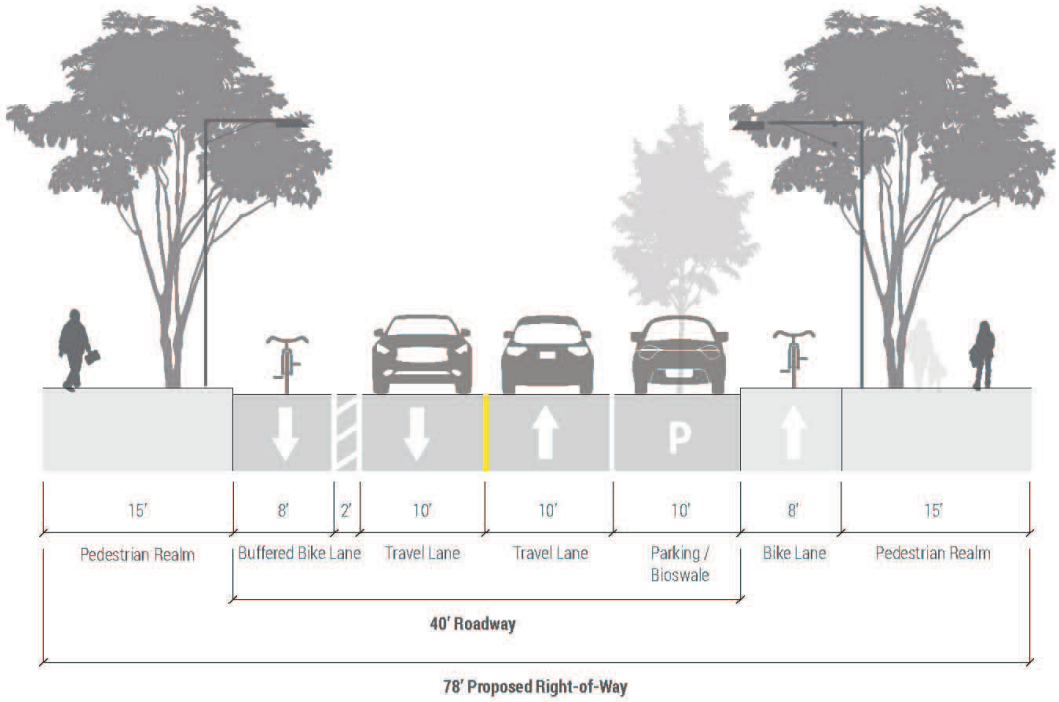
Section G



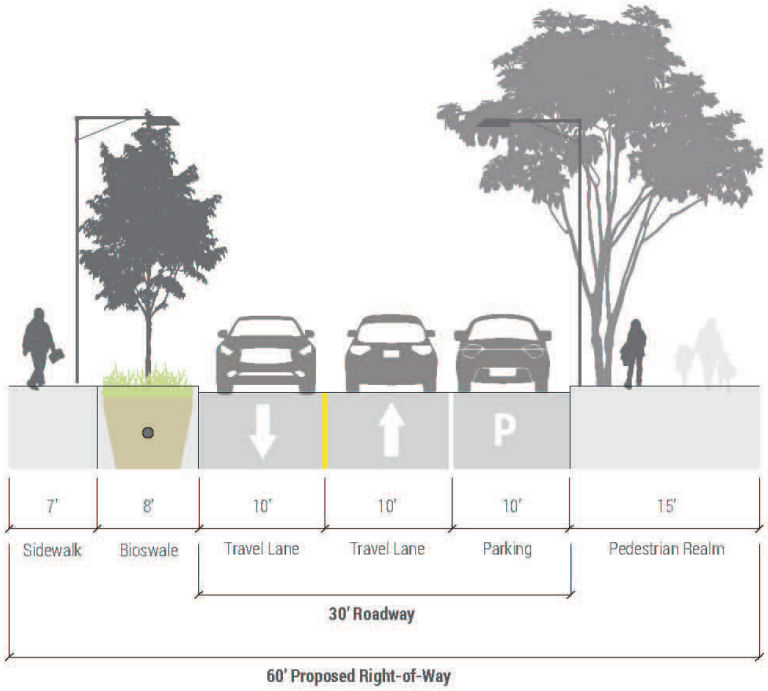
Section H - Barton Springs Road (3) - east of Congress Avenue


P
15'
10'
10'
10'
15'
Pedestrian Realm
Parking
Travel Lane
Travel Lane
Pedestrian Realm
30' Roadway
60' Proposed Right-of-Way

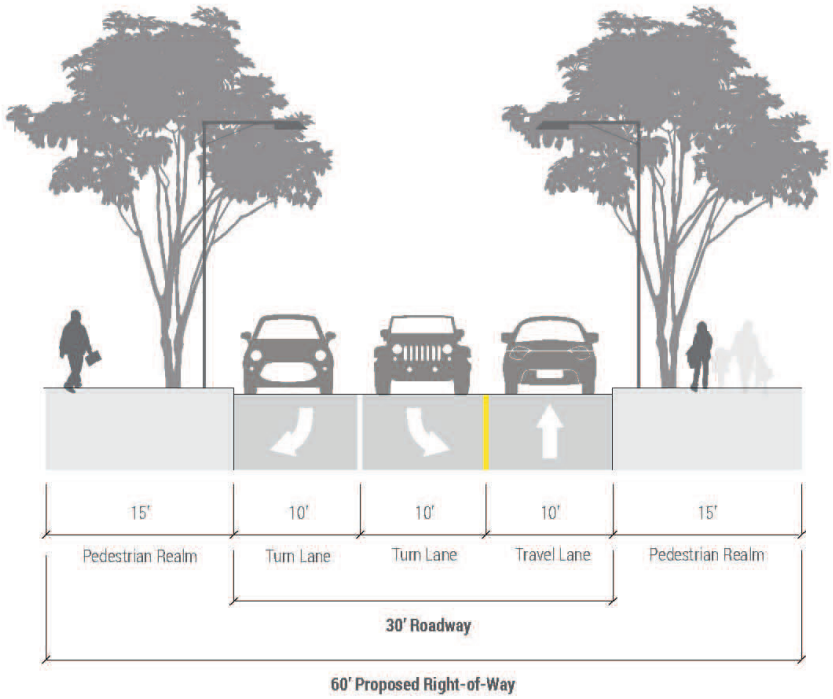
Section I



Section J - Barton Springs Road (4) - southbound toward Riverside Drive

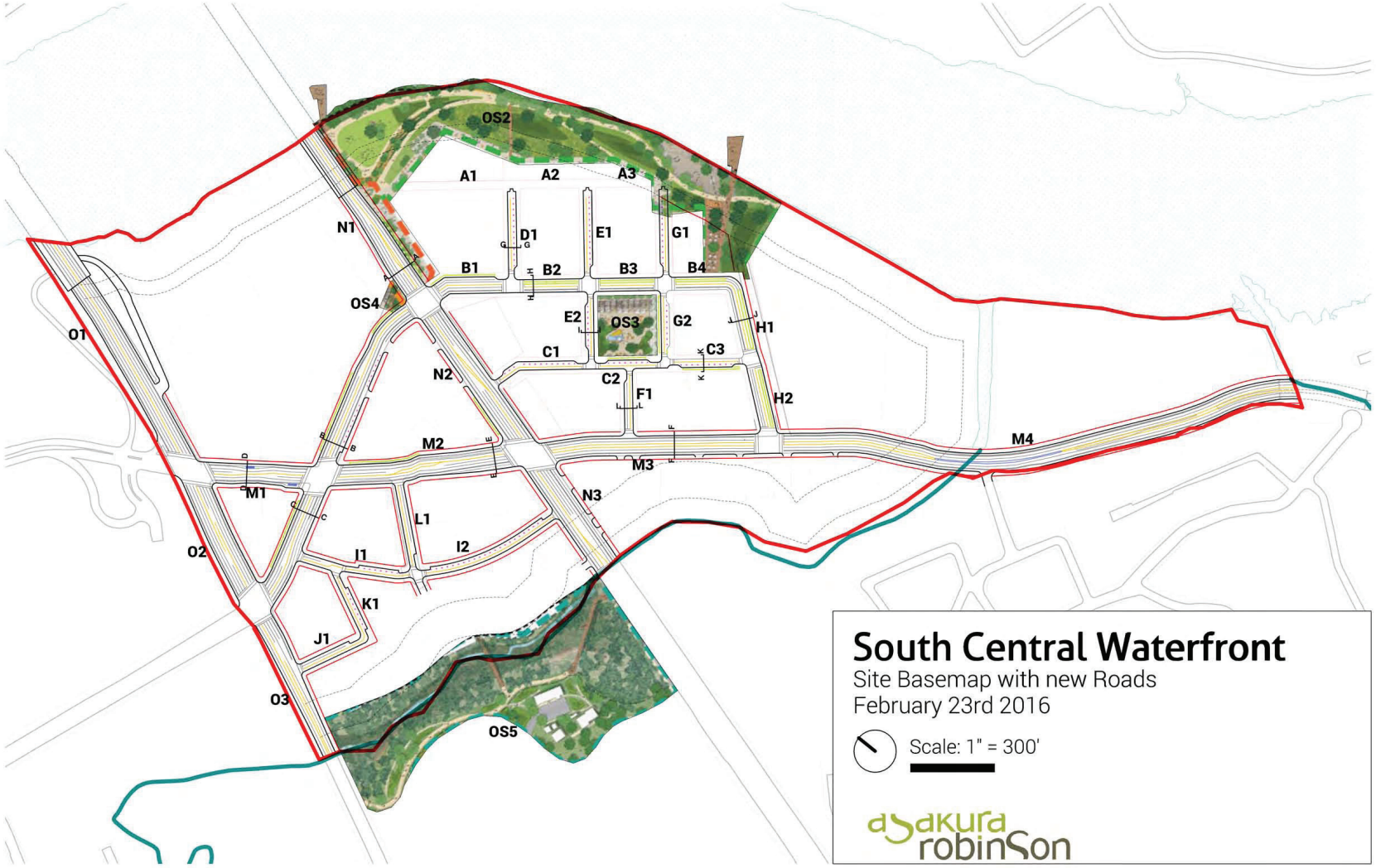

P
7'
8'
10'
10'
10'
15'
Sidewalk
Bioswale
Travel Lane
Travel Lane
Parking
Pedestrian Realm
30' Roadway
60' Proposed Right-of-Way

Section K


15'
10'
10'
10'
15'
Pedestrian Realm
Turn Lane
Turn Lane
Travel Lane
Pedestrian Realm
30' Roadway
60' Proposed Right-of-Way

Section L

II. Detailed Cost Estimates



South Central Waterfront Public Realm Preliminary Estimate of Probable Costs*

March 15, 2016

Open Space Summary Name	Code	Area (SF)	Area (ac)	Unit	Unit Cost	Total Cost
Waterfront Park	OS2	418,619	9.61	SF	$ 15.62	$ 6,537,119
Bouldin Creek / TSD	OS3	286,189	6.57	SF	$ 15.80	$ 4,521,908
Cox Crocket Plaza	OS4	60,548	1.39	SF	$ 59.36	$ 3,594,075
Barton Springs Rain Garden	OS5	36,590	0.84	SF	$ 21.07	$ 771,026
Open Space Total		**801,947**	**18.41**	**SF**	**$ 19.23**	**$ 15,424,128**

Streets and Green Infrastructure Summary Name	Code	Length (LF)	MFTP	Transit	Bike	Total Cost	Civil Cost	Amenities Cost	Landscape Cost	Transit / Bike Cost	Utilities Cost
Existing Streets (Total $)						**$ 23,957,590**	**$ 10,214,990**	**$ 600,000**	**$ 497,500**	**$ 360,000**	**$ 12,285,000**
Existing Streets ($/LF)		**7,787**				**$ 3,076.61**	**$ 1,311.80**	**$ 77.05**	**$ 63.90**	**$ 46.23**	**$ 1,577.63**
Barton Springs Drive	B5-6	989				$ 3,418,430	$ 1,647,300	$ 100,000	$ 111,880	$ -	$ 1,559,250
Riverside Drive	M	3,575				$ 13,735,270	$ 7,554,890	$ 200,000	$ 191,880	$ 150,000.00	$ 5,638,500
Congress Avenue	N	1,624				$ 3,653,200	$ 729,860	$ 150,000	$ 116,840	$ 105,000.00	$ 2,551,500
South First Street	O	1,599				$ 3,150,590	$ 282,940	$ 150,000	$ 77,000	$ 105,000.00	$ 2,535,750
New Streets (total)						**$ 33,974,460**	**$ 22,211,050**	**$ 1,150,000**	**$ 459,160**	**$ -**	**$ 10,154,250**
New Streets ($/LF)		**6,177**				**$ 5,500.16**	**$ 3,595.77**	**$ 186.17**	**$ 74.33**	**$ -**	**$ 1,643.88**
A Street	A	881				$ 1,953,660	$ 411,660	$ 150,000	$ 42,000	$ -	$ 1,350,000
Barton Springs Drive East	B1-4	1041				$ 7,699,590	$ 5,953,920	$ 200,000	$ 98,920	$ -	$ 1,446,750
C Street	C	323				$ 5,170,140	$ 3,678,910	$ 150,000	$ 74,480	$ -	$ 1,266,750
D Street	D	323				$ 1,797,910	$ 1,283,910	$ 50,000	$ 14,000	$ -	$ 450,000
E Street	E	539				$ 2,930,240	$ 1,996,740	$ 100,000	$ 28,000	$ -	$ 805,500
F Street	F	236				$ 1,384,750	$ 942,750	$ 50,000	$ 14,000	$ -	$ 378,000
G Street	G	547				$ 2,589,070	$ 1,580,540	$ 100,000	$ 42,280	$ -	$ 866,250
H Street	H	539				$ 4,075,800	$ 3,063,820	$ 100,000	$ 61,480	$ -	$ 850,500
I Street	I	923				$ 4,327,750	$ 2,736,750	$ 100,000	$ 42,000	$ -	$ 1,449,000
J Street	J	244				$ 673,890	$ 231,890	$ 50,000	$ 14,000	$ -	$ 378,000
K Street	K	250				$ 662,590	$ 204,840	$ 50,000	$ 14,000	$ -	$ 393,750
L Street	L	331				$ 709,070	$ 125,320	$ 50,000	$ 14,000	$ -	$ 519,750
Streets and GI Total						**$ 57,932,050**	**$ 32,426,040**	**$ 1,750,000**	**$ 956,760**	**$ 360,000**	**$ 22,439,250**

Public Realm Total		**$ 73,356,178**
Total With Contingency	35%	$ 99,030,841

*Total is based on preliminary design concepts as of March 2nd 2016 and does not include permeable paving options for prototype streets ($14/sf) or woonerf streets near the Cox Crocket Plaza ($14/sf)

South Central Waterfront Public Realm Preliminary Estimate of Probable Costs

March 2, 2016

Overall Park Areas						
Name	Code	Area (SF)	Area (ac)	Unit	Unit Cost	Total
Waterfront Park	OS2	418,619	9.61	SF	$ 15.62	$ 6,537,119
Bouldin Creek Congress to First	OS3	286,189	6.61	SF	$ 15.80	$ 4,521,908
Cox Crocket Plaza	OS4	60,548	1.39	SF	$ 59.36	$ 3,594,075
Barton Springs Rain Garden	OS5	36,590	0.84	SF	$ 21.07	$ 771,026
Grand Total		801,947	21.58	SF	$ 19.23	$ 15,424,128

Waterfront Park Detailed Breakdown						
Item	Code	Area (sq ft)	Area (ac)	Unit	Unit Cost	Total Cost
Boardwalk		47,613	1.09	SF	$ 15.00	$ 714,195
Softscape		137,029	3.15	SF	$ 6.00	$ 822,174
Trail		59,823	1.37	LF	$ 10.00	$ 598,230
Hardscape/Plaza		76,660	1.76	SF	$ 25.00	$ 1,916,500
Riverfront / Wetland		52,722	1.21	SF	$ 20.00	$ 1,054,440
Amenities						
Bat Viewing Pier		1		EA	$ 75,000.00	$ 75,000
Amphitheater		1		EA	$ 250,000.00	$ 250,000
Entry Plaza with Interpretive Features		1		EA	$ 50,000.00	$ 50,000
Overlook Cafe Terrace		1		EA	$ 125,000.00	$ 125,000
Pontoon Bridge Landing Pier		1		EA	$ 125,000.00	$ 125,000
Natural beach and kayak launch		1		EA	$ 35,000.00	$ 35,000
Pavilion deck and beer garden		1		EA	$ 60,000.00	$ 60,000
Kayak and bike rentals		1		EA	$ 40,000.00	$ 40,000
Water Quality Pond		44,772	1.03	SF	$ 15.00	$ 671,580
Waterfront Park Total	OS2	418,619	9.61	AC	$ 15.62	$ 6,537,119

Bouldin Creek / TSD Detailed Breakdown (Includes TSD Property)						
Item	Code	Area (sq ft)	Area (ac)	Unit	Unit Cost	Total Cost
Boardwalk		32,551	0.75	SF	$ 15.00	$ 488,265
Softscape		93,680	2.15	SF	$ 6.00	$ 562,080
Trail		40,898	0.94	LF	$ 10.00	$ 408,980
Hardscape/Plaza		52,409	1.20	SF	$ 25.00	$ 1,310,225
Riverfront / Wetland		36,043	0.83	SF	$ 20.00	$ 720,860
Amenities		286,189		SF	$ 2.00	$ 572,378
Water Quality Pond		30,608	0.70	SF	$ 15.00	$ 459,120
Bouldin Creek / TSD Total	OS3	286,189	6.57	AC	$ 15.80	$ 4,521,908

Cox / Crocket Plaza Detailed Breakdown						
Item	Code	Area (sq ft)	Area (ac)	Unit	Unit Cost	Total Cost
Boardwalk		6,887	0.16	SF	$ 15.00	$ 103,305
Softscape		3,820	0.09	SF	$ 6.00	$ 22,920
Trail		8,653	0.20	LF	$ 10.00	$ 86,530
Hardscape/Plaza		1,088	0.02	SF	$ 25.00	$ 27,200
Riverfront / Wetland		7,324	0.17	SF	$ 20.00	$ 146,480
Amenities						
Market Canopy		8,300		SF	$ 35.00	$ 290,500
Rain Garden		16,000		SF	$ 20.00	$ 320,000
Splash Pad		2,000		SF	$ 125.00	$ 250,000
Water Quality Pond		6,476	0.15	SF	$ 15.00	$ 97,140
Central Water Storage Cistern		1,500,000	N/A	Gal	$ 1.50	$ 2,250,000
Cox / Crocket Plaza Total	OS4	60,548	1.39	AC	$ 59.36	$ 3,594,075

Barton Springs Rain Garden Detailed Breakdown						
Item	Code	Area (sq ft)	Area (ac)	Unit	Unit Cost	Total Cost
Boardwalk		20,000	0.46	SF	$ 15.00	$ 300,000
Softscape		4,995	0.11	SF	$ 6.00	$ 29,970
Hardscape		3,795	0.09	SF	$ 25.00	$ 94,875
Rain Garden		7,800	0.18	SF	$ 35.00	$ 273,000
Amenities		36,590		SF	$ 2.00	$ 73,181
Barton Springs Rain Garden Total	OS5	36,590	0.84	AC	$ 21.07	$ 771,026

South Central Waterfront Public Realm Preliminary Estimate of Probable Costs

March 2, 2016

Street Name	Code	TOTALS	TOTAL PER CL	PER SF	Description	Centerline Length	Blockface Length	Width (ft) ROW	Paving	Sidewalk	Green	New Roadway Amount	Unit	Cost	New Sidewalk Amount	Unit	Cost	Demolition Amount	Unit	Cost
A - TBD	A1	$ 721,630	$ 2,167		Promenade	333	311	26	0	26	0	-	SF	-	8,660	SF	155,880	0	SF	-
A - TBD	A2	$ 625,600	$ 2,267		Promenade	276	265	26	0	26	0	-	SF	-	7,200	SF	129,600	0	SF	-
A - TBD	A3	$ 606,430	$ 2,230		Promenade	272	257	26	0	26	0	-	SF	-	7,010	SF	126,180	0	SF	-
Barton Springs Road East	B1	$ 2,086,810	$ 8,956	$ 154	Collector	233	194	88	58	15, 7	0, 8	13,580	SF	1,561,700	6,810	SF	122,580	0	SF	-
Barton Springs Road East	B2	$ 1,895,900	$ 6,894	$ 167	Collector	275	203	76	38	15, 7	0, 8	11,340	SF	1,304,100	7,720	SF	138,960	0	SF	-
Barton Springs Road East	B3	$ 1,859,690	$ 6,939	$ 168	Collector	268	208	76	38	15, 15	0, 8	11,080	SF	1,274,200	7,240	SF	130,320	0	SF	-
Barton Springs Road East	B4	$ 1,857,190	$ 7,008	$ 170	Collector	265	223	75	38	15, 15	0, 7	10,920	SF	1,255,800	7,570	SF	136,260	0	SF	-
Barton Springs Road East	B5	$ 1,636,640	$ 4,284		Collector	382	382	100	70	15, 7	0, 8	3,980	SF	457,700	10,550	SF	189,900	3980	SF	258,700
Barton Springs Road East	B6	$ 1,781,790	$ 2,935		Collector	607	607	100	70	15, 7	0, 8	3,360	SF	386,400	4,980	SF	89,640	3360	SF	218,400
C - TBD	C1	$ 1,464,490	$ 4,664	$ 196	Internal	314	268	58	20	15, 15	0	7,480	SF	860,200	4,700	SF	84,600	0	SF	-
C - TBD	C2	$ 2,122,690	$ 7,920	$ 152	Internal	268	208	58	20	15, 7	0, 8	13,940	SF	1,603,100	4,130	SF	74,340	0	SF	-
C - TBD	C3	$ 1,582,960	$ 5,156	$ 201	Internal	307	263	58	28	7, 15	8, 0	7,870	SF	905,050	7,890	SF	142,020	0	SF	-
D - TBD	D1	$ 1,797,910	$ 5,566		Internal	323	258	66	36	15, 15	0	9,370	SF	1,077,550	11,260	SF	202,680	0	SF	-
E - TBD	E1	$ 1,776,860	$ 5,559	$ 193	Internal	314	255	66	36	15, 15	0	9,190	SF	1,056,850	11,620	SF	209,160	0	SF	-
E - TBD	E2	$ 1,153,380	$ 5,126	$ 202	Internal	225	225	58	28	15, 15	0	5,710	SF	656,650	3,760	SF	67,680	0	SF	-
F - TBD	F1	$ 1,384,750	$ 5,868		Internal	236	236	60	30	15, 15	0	7,090	SF	815,350	6,820	SF	122,760	0	SF	-
G - TBD	G1	$ 1,351,580	$ 4,224	$ 252	Internal	320	320	50	20	15, 15	0	5,360	SF	616,400	9,150	SF	164,700	0	SF	-
G - TBD	G2	$ 1,237,490	$ 5,451	$ 206	Internal	227	227	58	28	15, 7	0, 8	6,020	SF	692,300	5,650	SF	101,700	0	SF	-
H - TBD	H1	$ 2,012,920	$ 7,346		Collector	274	274	74	46	13, 15	8, 0	11,870	SF	1,365,050	7,590	SF	136,620	0	SF	-
H - TBD	H2	$ 2,062,880	$ 7,784		Collector	265	265	82	46	13, 15	8, 0	12,290	SF	1,413,350	7,480	SF	134,640	0	SF	-
I - TBD	I1	$ 1,157,400	$ 2,736		Internal	423	423	60	30	15, 15	0	1,170	SF	134,550	11,590	SF	208,620	1170	SF	76,050
I - TBD	I2	$ 3,170,350	$ 6,341	$ 182	Internal	500	500	66	36	15, 15	0	17,390	SF	1,999,850	16,920	SF	304,560	0	SF	-
J - TBD	J1	$ 673,890	$ 2,762		Internal	244	244	60	30	15, 15	0	750	SF	86,250	7,860	SF	141,480	750	SF	-
K - TBD	K1	$ 662,590	$ 2,650		Internal	250	250	58	28	15, 15	0	310	SF	35,650	8,120	SF	146,160	310	SF	20,150
L - TBD	L1	$ 709,070	$ 2,142		Internal	331	331	68	38	15, 15	0	-	SF	-	6,660	SF	119,880	0	SF	-
M - Riverside Drive	M1	$ 1,505,990	$ 4,365	$ 350	Core Transit	345	345	103	73	15, 15	0	4,300	SF	408,500	7,670	SF	138,060	4300	SF	279,500
M - Riverside Drive	M2	$ 2,956,160	$ 4,677	$ 320	Core Transit	632	632	105	75	15, 7	0, 8	9,240	SF	877,800	10,000	SF	180,000	11230	SF	729,950
M - Riverside Drive	M3	$ 2,956,170	$ 4,146	$ 326	Core Transit	713	713	100	70	15, 15	0	9,080	SF	862,600	12,120	SF	218,160	9080	SF	590,200
M - Riverside Drive	M4	$ 6,316,950	$ 3,351	$ 480	Core Transit	1885	1885	100	70	15, 15	0	13,160	SF	1,250,200	48,880	SF	879,840	14080	SF	915,200
N - Congress Ave	N1	$ 1,659,450	$ 2,473			671	671	110	80	15, 7	0, 8	2,240	SF	212,800	3,680	SF	66,240	2240	SF	145,600
N - Congress Ave	N2	$ 1,187,990	$ 2,148			553	553	110	82	7, 15	8, 0	-	SF	-	8,850	SF	159,300	0	SF	-
N - Congress Ave	N3	$ 805,760	$ 2,014			400	400	120	92	15, 15	0	-	SF	-	2,080	SF	37,440	0	SF	-
O - South First St	O1	$ 1,548,320	$ 1,761			879	879	112	80	7, 15	0	-	SF	-	1,180	SF	21,240	0	SF	-
O - South First St	O2	$ 958,780	$ 2,310	$ 940		415	415	116	89	7, 15	0	1,020	SF	96,900	1,560	SF	28,080	1020	SF	66,300
O - South First St	O3	$ 643,590	$ 2,110			305	305	100	70	15, 15	0	-	SF	-	3,130	SF	56,340	0	SF	-
		Avg -->	$ 4,412	$ 274					Assumptions -->			Existing	$	95.00		$	18.00		$	65.00
												New	$	115.00						

South Central Waterfront Public Realm Preliminary Estimate of Probable Costs

March 2, 2016

Restriping			Protected Bike Lane			Green Infrastructure			Street Trees			Street Furniture			Transit			Utilities			Pedestrian Lighting		
Amount	Unit	Cost	Amount	Unit	Cost	Amount	Unit	Cost	Amount	Unit	Cost	Amount	Unit	Cost	Amount	Type	Cost	Amount	Unit	Cost	Amount	Unit	Cost
0	LF	-				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	330	LF	$ 222,750	310	LF	$ 279,000
0	LF	-				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	280	LF	$ 189,000	270		$ 243,000
0	LF	-				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	270	LF	$ 182,250	260		$ 234,000
1210	LF	9,680				800	SF	9,600	10	EA	7,000	1	Block	50,000	0		0	230	LF	$ 155,250	190		$ 171,000
850	LF	6,800				1670	SF	20,040	10	EA	7,000	1	Block	50,000	0		0	280	LF	$ 189,000	200		$ 180,000
860	LF	6,880				1670	SF	20,040	10	EA	7,000	1	Block	50,000	0		0	270	LF	$ 182,250	210		$ 189,000
830	LF	6,640				1770	SF	21,240	10	EA	7,000	1	Block	50,000	0		0	270	LF	$ 182,250	220		$ 198,000
2820	LF	22,560				3190	SF	38,280	30	EA	21,000	1	Block	50,000	0		0	380	LF	$ 256,500	380		$ 342,000
3000	LF	24,000				2050	SF	24,600	40	EA	28,000	1	Block	50,000	0		0	610	LF	$ 411,750	610		$ 549,000
430	LF	3,440				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	310	LF	$ 209,250	270		$ 243,000
340	LF	2,720				1190	SF	14,280	10	EA	7,000	1	Block	50,000	0		0	270	LF	$ 182,250	210		$ 189,000
430	LF	3,440				2100	SF	25,200	20	EA	14,000	1	Block	50,000	0		0	310	LF	$ 209,250	260		$ 234,000
460	LF	3,680				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	320	LF	$ 216,000	260		$ 234,000
450	LF	3,600				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	310	LF	$ 209,250	260		$ 234,000
350	LF	2,800				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	230	LF	$ 155,250	230		$ 207,000
580	LF	4,640				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	240	LF	$ 162,000	240		$ 216,000
310	LF	2,480				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	320	LF	$ 216,000	320		$ 288,000
370	LF	2,960				1190	SF	14,280	20	EA	14,000	1	Block	50,000	0		0	230	LF	$ 155,250	230		$ 207,000
1070	LF	8,560				1120	SF	13,440	20	EA	14,000	1	Block	50,000	0		0	270	LF	$ 182,250	270		$ 243,000
700	LF	5,600				1670	SF	20,040	20	EA	14,000	1	Block	50,000	0		0	270	LF	$ 182,250	270		$ 243,000
710	LF	5,680				0	SF	-	30	EA	21,000	1	Block	50,000	0		0	420	LF	$ 283,500	420		$ 378,000
930	LF	7,440				0	SF	-	30	EA	21,000	1	Block	50,000	0		0	500	LF	$ 337,500	500		$ 450,000
520	LF	4,160				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	240	LF	$ 162,000	240		$ 216,000
360	LF	2,880				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	250	LF	$ 168,750	250		$ 225,000
680	LF	5,440				0	SF	-	20	EA	14,000	1	Block	50,000	0		0	330	LF	$ 222,750	330		$ 297,000
2460	LF	19,680				0	SF	-	20	EA	14,000	1	Block	50,000	2	METRORapi	$ 45,000	350	LF	$ 236,250	350		$ 315,000
4910	LF	39,280				1990	SF	23,880	40	EA	28,000	1	Block	50,000	0	Bus Stop	$ 35,000	630	LF	$ 425,250	630		$ 567,000
5870	LF	46,960				0	SF	-	50	EA	35,000	1	Block	50,000	2	Bus Stop	$ 35,000	710	LF	$ 479,250	710		$ 639,000
14870	LF	118,960				0	SF	-	130	EA	91,000	1	Block	50,000	3	Bus Stop	$ 35,000	1890	LF	$ 1,275,750	1890		$ 1,701,000
5260	LF	42,080				2040	SF	24,480	40	EA	28,000	1	Block	50,000	0	Bus Stop	$ 35,000	670	LF	$ 452,250	670		$ 603,000
4260	LF	34,080				1280	SF	15,360	40	EA	28,000	1	Block	50,000	2	Bus Stop	$ 35,000	550	LF	$ 371,250	550		$ 495,000
4040	LF	32,320				0	SF	-	30	EA	21,000	1	Block	50,000	0	Bus Stop	$ 35,000	400	LF	$ 270,000	400		$ 360,000
1760	LF	14,080				0	SF	-	60	EA	42,000	1	Block	50,000	0	Bus Stop	$ 35,000	880	LF	$ 594,000	880		$ 792,000
0	LF	-				0	SF	-	30	EA	21,000	1	Block	50,000	2	Bus Stop	$ 35,000	420	LF	$ 283,500	420		$ 378,000
0	LF	-				0	SF	-	20	EA	14,000	1	Block	50,000	2	Bus Stop	$ 35,000	310	LF	$ 209,250	310		$ 279,000
		$ 8.00						$ 12.00			$ 700.00			$ 50,000			$ 35,000			$ 675.00			$ 900.00

ECONorthwest
ECONOMICS • FINANCE • PLANNING

DATE: October 13, 2015
TO: SCW Project Team
FROM: ECONorthwest
SUBJECT: SOUTH CENTRAL WATERFRONT MARKET OVERVIEW

The purpose of this memorandum is to set the stage for the creation of the baseline scenario and a set of six alternative development scenarios for Austin's South Central Waterfront (SCW) by providing an external market analysis report. The scope for this project did not describe this memorandum as a full market analysis with original analysis. Rather, this brief summary of existing, published information will help inform possible development programs, strategies, and action steps moving forward.

This memorandum contains the following:

Part I: Overview of the South Central Waterfront

An overview of existing conditions in the South Central Waterfront, including the current number of residents and employees.

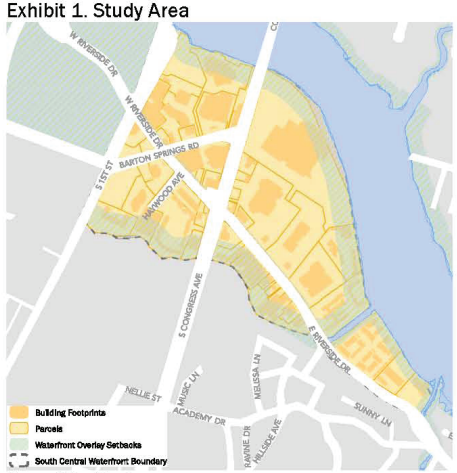
Part II: Development Types

An overview of existing market conditions for residential, commercial, hotel, and civic development types, derived from several sources. We have included screen captures of applicable exhibits, where warranted. Local developers and real estate firms assisted in verifying market conditions such as achievable rents, vacancy rates, and development costs.

Part I: Overview of the South Central Waterfront

The South Central Waterfront study area encompasses 97 acres located just south of downtown and bounded by South First on the west, Blunn Creek to the east, Lady Bird Lake on the north, and East Riverside Drive and Bouldin Creek on the south. Within the two Census Block Groups[1] that comprise the study area, the population was 2,481 in 2013.[2] Since 2013, several multifamily developments have been completed, increasing the overall population.

Exhibit 1. Study Area



Source: City of Austin

The area has:

- 1,297 multifamily units: 684 existing apartment units, 142 condos, and 471 apartment units under construction as of October 2015.
- Three hotels with a total of 839 rooms.
- 1,225,332 square feet of office space.
- 218,181 square feet of retail space.

A separate analysis through Imagine Austin looked at population growth in Census tracts intersecting the area, using population analysis areas that roughly corresponded to the area's Census tracts (DTIF250 and DTIF253, see Exhibit 11).[3] Imagine Austin estimated that this area's population would increase by 56 percent from 11,388 in 2013 to 17,878 in 2040, or one percent of the 2040 population.

[1] These tracts are Tract 13.05, Block Group 1 and 14.01, Block Group 1.
[2] 2009-2013 ACS 5-year averages.
[3] The analysis areas from the Imagine Austin population projections correspond to Census Tracts 13.05, 14.01, and 14.02. These analysis areas include adjacent single-family neighborhoods, greatly overestimating the actual number of residents in the study area.

Part II: Development Types

Residential Development

The City of Austin has experienced significant population growth over the past 20 years, growing by 41 percent in the 1990s, and another 20 percent between 2000 and 2010.[4] In 2013, Austin's population estimate was about 855,000, a 12 percent increase from 2010. Major trends within the City of Austin that have an effect on housing demand include[5]:

- **A relatively young population.** In 2013, 56 percent of the population was under the age of 35 (compared with 47 percent in the U.S.). Witten Advisors, a national real estate research firm, found that among the major metropolitan areas it tracks, Austin has the largest concentration of renters under age 35. Many of those renters have put off forming households during the Great Recession.
- **A high number of non-family households.** About 48 percent of households are non-family households. According to the Witten report, almost half (49 percent) of apartments are occupied by a single person.
- **Increasing demand for senior housing.** As the Baby Boomer generation ages, Austin's population 55 years and above continues to increase. Since 2000, the share of the population over the age of 55 has grown from 12 percent to 17 percent in 2013. However, Austin has a much lower percent of residents over the age of 55 than the U.S., at 27 percent.
- **Steady but high rates of poverty.** About 18 percent of Austin's population was below the federal poverty level in 2013, compared with 16 percent in the state of Texas.[6]
- **A large and increasing number of Hispanic and foreign-born households, but a decreasing share of African American residents.** The Hispanic population increased from 31 percent in 2000 to 34 percent in 2013. About 20 percent of Austin's population is foreign-born. Half of foreign-born residents are from Mexico and a quarter are from Asia.[7] About 7 percent of the population is African American, compared with 13 percent nationwide.

Renter-occupied Housing

The Austin multifamily market has been strong, driven by high population growth, new business creation and attraction, and low unemployment.[8] Average rent has increased by approximately 20 percent ($200 a month) over the last 10 years, and is steadily increasing post-recession (see Exhibit 2). The increase in rent has decreased the gap between average monthly rent and average monthly mortgage payments since 2006.

[4] US Census Bureau; American Community Survey 1-Year Estimates; City of Austin Population History, http://www.austintexas.gov/sites/default/files/files/Planning/Demographics/population_history_pub.pdf
[5] All data unless otherwise noted are from ACS 1-year estimates from 2013 for the City of Austin.
[6] 2013 1-year American Community Survey data
[7] Imagine Austin Comprehensive Plan
[8] Integra Realty Resources, Austin Texas Multifamily 2015 Mid-Year Viewpoint.

Overall, the market for Class A units is particularly strong.[9] As of August 2015, Class A unit market rents in Central Austin ($1.94 per square foot) and the Central Business District ($2.58 per square foot) were some of the highest in the region.[10] Over the past three years, Class A rents have increased by over four percent annually in the region, and are expected to rise for the next three years.[11]

Exhibit 2. Average Monthly Rent and Monthly Mortgage, Austin, 2006-2015

Source: Berkadia Austin, Austin Economic Trends 1H 2015

Apartment rental rates for recently developed properties have ranged from $2.71 to $3.34 per square foot across all unit types, with occupancy rates ranging from 82 percent to 99 percent.[12] In 2015, 9,000 new apartment units were forecast to be constructed in the Austin region; the number is expected to decrease to 6,700 units per year in 2016 and 2017.[13] Within two miles of the study area, the City of Austin[14] reports that, as of July 2015:

- 1,817 units were under construction.
- 11 apartment projects had been approved.
- 10 apartment projects were under review.
- 3,115 units were planned.

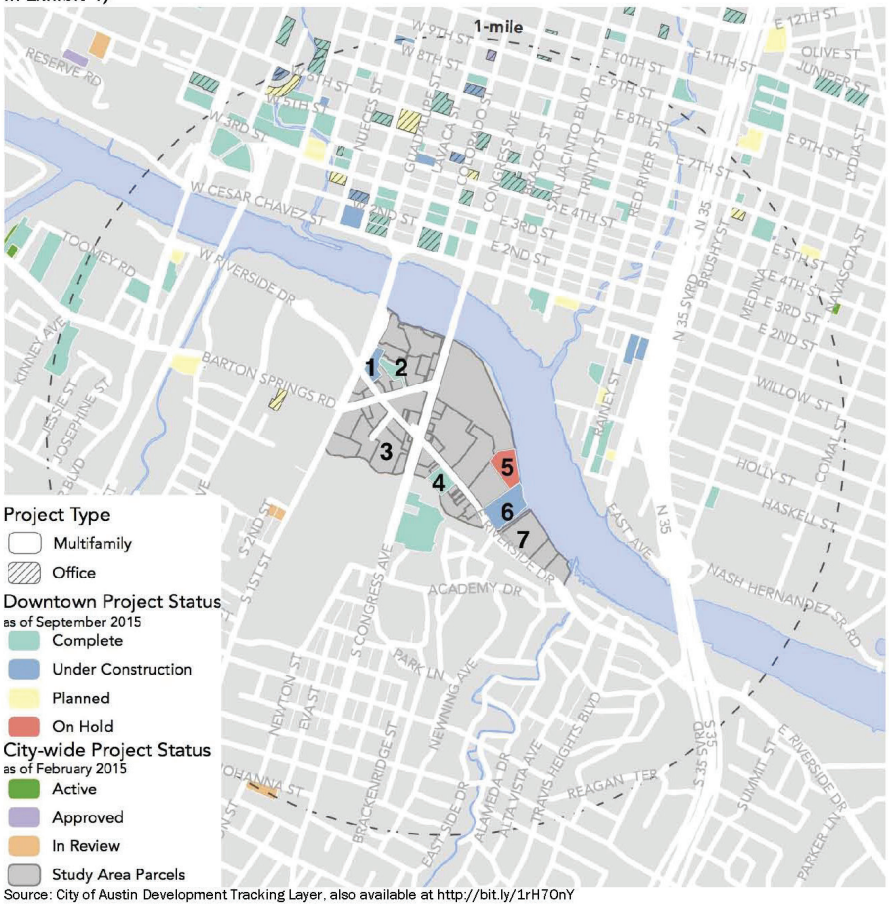
Exhibit 3 shows development activity near the study area, courtesy of the City of Austin. The numbers in Exhibit 3 correspond to the data shown in

[9] These units were recently built or renovated to a high standard. More info: http://www.crefcoa.com/property-classifications.html
[10] Transwestern Market Watch, August 2015. http://www.transwestern.net/Resources/ATXMarketWatch-Apartment.pdf
[11] Integra Reality Resources-Austin, 2015 Mid-Year Viewpoint, Multifamily
[12] Stream Realty.
[13] Witten Advisors LLC, Austin First Quarter 2015
[14] City of Austin Emerging Development Projects GIS Data. http://bit.ly/1rH7OnY

Exhibit 4. The majority of development activity is occurring in downtown Austin. Most of the activity in or near the study area has been multifamily development. The numbers on the map correspond to

Exhibit 4, which provides more detail on multifamily development in the study area.

Exhibit 3. Development Activity Since 2008 within One Mile of the Study Area (See Project Details in Exhibit 4)



Source: City of Austin Development Tracking Layer, also available at http://bit.ly/1rH7OnY

Exhibit 4 shows that the study area has seven multifamily developments comprising approximately 1,275 units. Two apartment complexes have been completed in recent years: The Catherine and Crescent. The multifamily project on 300 E. Riverside, and the apartments at 422 W. Riverside, are under construction as of October 2015 and will be completed in 2016

Exhibit 4. Multifamily Developments in the Study Area, Existing and Under Construction

# in Exhibit 3	Name and Address	Status	Asking Rents	Website	# Units
1	**422 at the Lake** (422 W. Riverside)	Under Construction	Not available	http://422atthelakeapartments.com/	207
2	**The Catherine** (210 Barton Springs)	Completed, 2014	3.20 SF to 4.10 SF	http://thecatherineaustin.com/gallery	300
3	**Congress Square** 500 S. Congress	Completed, 1971	Not available	http://www.zillow.com/homes/29382491_zpid/?hdpRedirected=true&3col=true	115
4	**Crescent** (127 E. Riverside)	Completed, 2008	2.09 SF	http://www.crescent-austin.com/photos.aspx	169
5	**SoCo on the Lake** (222 E. Riverside)	Completed, 1973	2.50 SF	http://www.socoapartments.com/	100
6	300 E. Riverside	Under Construction	Not available		264
7	Riverwalk Condominiums	Completed, 1971	N/A	http://www.myriverwalk.org	142
Total					**1,297**

Affordable Rental Housing

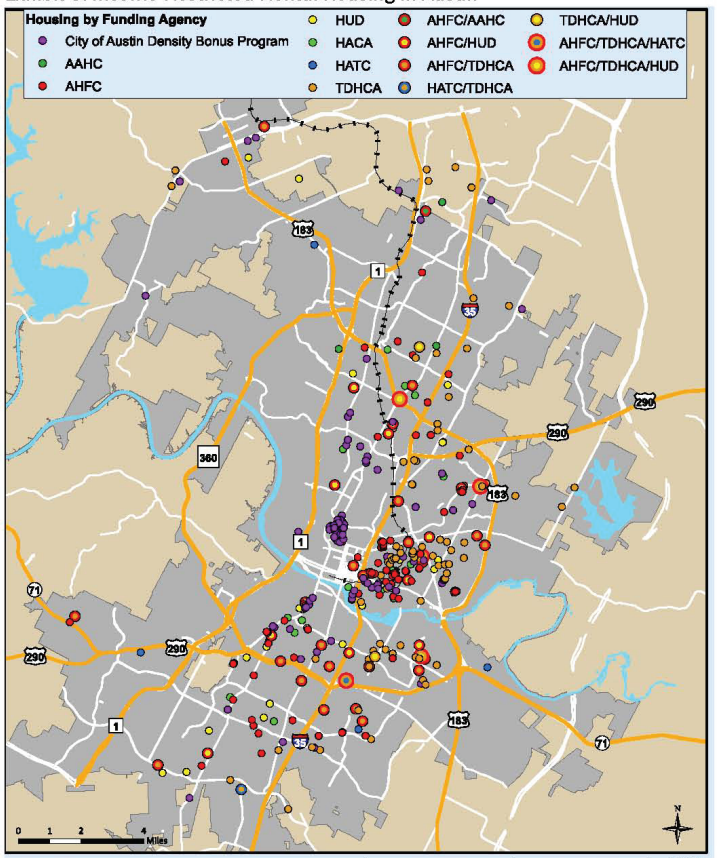
This memorandum does not provide a complete overview of the housing affordability gap in the City of Austin, but instead seeks to document the lack of affordable housing in the study area.

The City faces a number of challenges related to affordable housing. Throughout 2014 and 2015, competition among low and moderate-income renters for a limited housing supply has pushed vacancy levels down to unprecedented levels. The 2014 Housing Market Analysis found challenges relating to: a shortage of affordable housing near transit and services, rising housing costs in a handful of neighborhoods have caused long-time residents to seek more affordable housing elsewhere, and the inability of most renters to transition to homeownership.

According to the City's 2014 market analysis[15], the City has a gap of at least 41,000 affordable rental housing units and does not have an immediate plan to bridge that gap. That plan also stated that Austin has 18,500 affordable rental units funded with local, state, and federal funds. However, recent 2015 analysis conducted by the City of Austin found 25,761 total affordable units throughout the city, shown in Exhibit 5. None of these units are located in the Study Area.

[15] City of Austin Comprehensive Housing Market Study, 2014. https://austintexas.gov/sites/default/files/files/NHCD/2014_Comprehensive_Housing_Market_Analysis_-_Document_reduced_for_web.pdf

Exhibit 5. Income Restricted Rental Housing in Austin



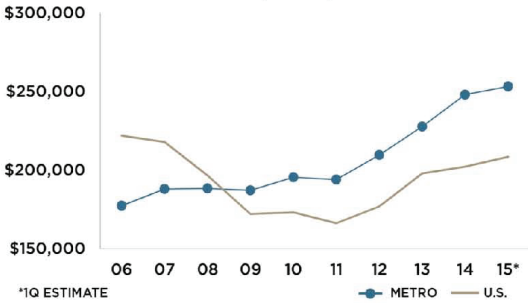
Funding Entity	Properties	Affordable Units
Austin Affordable Housing Corporation (AAHC)	4	505
Austin Housing Finance Corporation (AHFC)	102	2,790
City of Austin Density Bonus Program	109	5,578
Housing Authority of City of Austin (HACA)	18	1,817
Housing Authority of Travis County (HATC)	4	121
US Dept of Housing and Urban Development (HUD)	23	1,147
TX Dept of Housing & Community Affairs (TDHCA)	84	8,303
AHFC/AAHC	1	240
AHFC/HUD	14	437
AHFC/TDHCA	21	3,614
AHFC/TDHCA/HATC	1	70
AHFC/TDHCA/HUD	5	705
HATC/TDHCA	1	192
HUD/TDHCA	2	242
Total	389	25,761

Source: City of Austin. https://austintexas.gov/sites/default/files/files/NHCD/Reports_Publications/Affordable_Housing_Map_08-2015_forweb.pdf

Owner-Occupied Housing

In a recent report released by the Austin Board of Realtors, the July 2015 median single-family home price was $269,500, an 8 percent increase since July 2014. Active single-family home listings on the market in July 2015 increased to 4,133, a 5 percent increase from the same period last year.[16] Exhibit 6 displays median home price in the U.S. and the Austin region. The average home price has been increasing since 2011 and is higher than the national median home price.

Exhibit 6. Median Home Price, Austin, 2006-2015



Source: Berkadia Austin, Austin Economic Trends 1H 2015

Condominiums

Our analysis focused on condos as the likely owner-occupied use type for the South Central Waterfront. Currently, there are 142 condos in the study area at the RiverWalk Condo complex next to Bouldin Creek.

In the first five months of 2015, there were 1,904 new condo listings in the City of Austin, an increase of two percent over the same time frame in 2014. The average number of condo listings on the market was 14 percent higher in 2015 than 2014, with an average of 623 condos on the market. However, there were only 1,496 pending condo sales in the first five months of 2015, a four percent decrease over the same time frame in 2014. In the first part of 2015, condos spent an average of 43 days on the market, eight percent fewer days than the same time frame in 2014.[17]

The median price for condos and townhomes in January through May of 2015 in the Austin region was $222,000 (four percent increase from 2014) and the average condo and townhome price was $284,089 (a nine percent increase from 2014). Average price per square foot also increased by nine percent from 2014 to $222 in 2015.[18] In the 78704 zip code, where the study

[16] Austin Board of Realtors, July 2015 Housing Statistics. https://www.abor.com/news_media/press_releases/2015/p7_15.cfm

[17] 2015 Texas Condominium Mid-Year Sales Report. https://www.texasrealestate.com/uploads/files/general-files/2015TexasCondoSalesMidYearReport.pdf

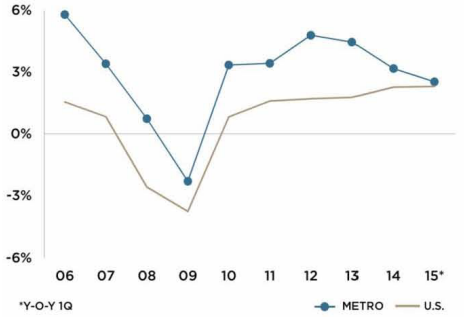
[18] 2015 Texas Condominium Mid-Year Sales Report. https://www.texasrealestate.com/uploads/files/general-files/2015TexasCondoSalesMidYearReport.pdf

area is located, there were 257 sales records from February 2015 through October 2015 with an average sales price of $366,000.[19]

Commercial Development

Austin experienced milder recession effects compared to the rest of the United States, and only had a net job loss in 2009. Exhibit 7 below shows employment growth in the metro area and in the United States from 2006-2015. In all years, Austin's employment growth was higher than the U.S. average, though the rate of employment growth has been decreasing since 2012. Currently, employment is 17 percent above Austin's "pre-recession peak," with 3.1 percent job growth from January 2014 to January 2015 (27,700 jobs).[20] Increased entrance into the job market has had a positive impact on the unemployment rate—decreasing from 3.6 percent in January 2015 to 3.1 percent in May 2015—well below the unemployment rates of Texas (4.1 percent) and the United States (5.3 percent).[21]

Exhibit 7. Employment Growth, Austin Metro and United States, 2006-2015



Source: Berkadia Austin, Austin Economic Trends 1H 2015

Both the number of employees and the average wage increased in many sectors from the first quarter of 2014 to the first quarter of 2015. During this time period, Austin added about 36,000 jobs. As shown in Exhibit 8, industries with the largest employment growth were professional and technical services (8.5 percent growth). Sectors with the least growth were Manufacturing (0.5 percent) and Government (0.9 percent).[22] The increase in high and middle-wage employment in Austin will drive further demand for new market-rate housing construction. In addition, many lower wage industries have added jobs, pointing to a need for affordable housing throughout the region.

[19] Redfin sales data for all condos in the 78704 zip code from February – October 2015. http://www.redfin.com
[20] Witten Advisors, LLC. Austin First Quarter 2015
[21] Witten Advisors, LLC. Austin First Quarter 2015; Austin Chamber of Commerce, Economic Indicators July 2015
[22] Austin Chamber of Commerce, Economic Indicators, July 2015.

Exhibit 8. Employment by Industry, Selected Industries (1Q 2014 and 1Q 2015)

	Average Employment			Average Yearly Wage		
Industry	2014 Q1	2015 Q1	% Change 2014-2015	2015 Q1	% Change 2014-2015	as % of US (2014 Q4-Private)
Professional and technical services	77,468	86,369	11.5%	$ 89,076	2.3%	98.8%
Construction	47,979	53,028	10.5%	$ 53,040	2.8%	98.5%
Arts, entertainment, and recreation	12,837	13,932	8.5%	$ 25,116	3.9%	89.2%
Information	24,633	26,309	6.8%	$ 86,060	5.1%	95.1%
Accommodation and food services	91,686	97,623	6.5%	$ 19,968	3.2%	105.6%
Wholesale trade	41,228	43,621	5.8%	$ 91,208	-2.1%	104.6%
Health care and social assistance	95,215	99,419	4.4%	$ 48,412	2.4%	110.8%
Finance and insurance	35,847	37,342	4.2%	$ 93,860	5.6%	95.1%
Transportation and Warehousing	15,918	16,361	2.8%	$ 49,244	0.1%	92.1%
Retail Trade	95,029	96,614	1.7%	$ 32,396	2.1%	110.8%
Real estate and rental and leasing	15,855	16,079	1.4%	$ 58,604	-1.9%	106.9%
Educational services	91,269	92,469	1.3%	$ 42,744	2.5%	83.7%
Manufacturing	57,606	57,299	-0.5%	$ 110,500	2.1%	133.3%

Source: Quarterly Census of Employment and Wages data for Austin region, Q1 2014 and Q1 2015.

According to the Imagine Austin forecast, the total employment in the census tracts (see Exhibit 11) that intersect with the Central South Waterfront is forecast to increase by 84 percent between 2010 and 2040, from 13,371 in 2010 to 24,625 in 2040.[23]

Office

Austin's office market has been steadily growing over the past year as the economy has strengthened. The Class A office research report from Marcus & Millichap found that "corporate expansions have intensified in Austin, elevating job creation, generating demand for office space, and sparking a construction boom."[24] Over the past three years, the Austin Class A office space market has seen an increase in rent from two to almost four percent, and a report from Integra Realty Resources indicated that the market should maintain these growth rates for the next three years.[25]

Exhibit 9 shows that vacancy rates in the Austin office market have remained relatively steady over the past year, decreasing overall from 9.6 percent in the second quarter of 2014 to 9.2 percent in the same quarter in 2015.[26] The vacancy rate for Class A spaces was 9.7 percent in the second quarter of 2015. Direct net absorption has been positive every quarter since the second quarter of 2014, with the market experiencing over 250,000 square feet of absorption in the second quarter in 2015 (Class A office space comprised almost half of total office absorption).[27]

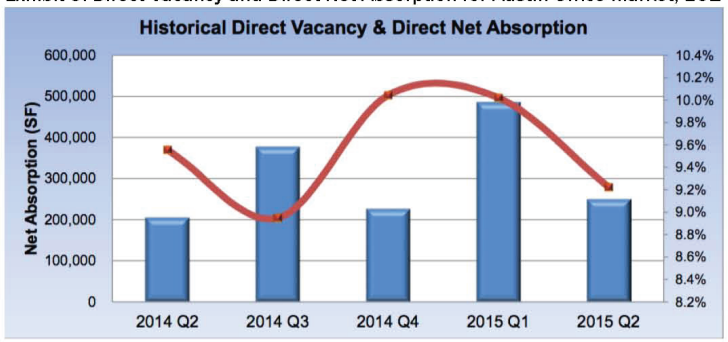
Rental rates for competitive set Class A office space in Austin ranged from $26 to $34 per square foot NNN, with occupancy ranging from 82 to 99 percent. Rental rates for Tech/Creative Office

[23] Imagine Austin Forecast.
[24] Austin Office Research Report.
http://www.marcusmillichap.com/research/researchreports/reports/2015/07/06/austin-office-research-report
[25] Integra Reality Resources-Austin, 2015 Mid-Year Viewpoint.
[26] Integra Reality Resources-Austin, 2015 Mid-Year Viewpoint.
[27] Stream, 2Q 2015 Market Overview.

space ranged from $26 to $36 per square foot NNN, with occupancy ranging from 43 percent to 100 percent.[28]

Twelve-month forecasts for the Austin Class A office market indicate positive trends, showing four percent increases in market rent, a steady discount rate, and over 700,000 square feet of absorption.[29] According to Marcus and Millichap, total net absorption will be around 3.2 million square feet in 2015, and "strong tenant demand will continue to push rents higher."[30]

Exhibit 9. Direct Vacancy and Direct Net Absorption for Austin Office Market, 2014-2015



Source: Stream 2Q Market Overview.

Retail

Population increases, as well as low unemployment rates and expanding business, have contributed to a strong Austin retail market. Vacancy rates have decreased over the past year, while rental rates increased for all types of retail (mall, community, and neighborhood retail). Over the past three years, Austin's retail market has seen positive average annual change in value of 0.1–1.9 percent for regional mall and 2–3.9 percent for community and neighborhood retail, and is expected to remain consistent for the next three years.[31] Vacancy rates ranged from 5.5 percent to 7.6 percent, and market rent ranged from $20-$24 per square foot.

Over the next twelve months, there will be 1,400,000 million square feet of retail construction and the market will see a 2.5 percent increase in rent. The going in cap rate and discount rate are expected to remain steady.[32]

Hotel

Austin, as a business center and popular area for music and culture, has a thriving hotel market. In 2013, there were 21.54 million person stays in the Austin-Round Rock MSA, up from 19.17 million person-stays in 2011. Of the total stays in 2013, about 65 percent were for leisure and 35 percent for business.[33] As demand for hotels increased, the hotel market strengthened and is expected to continue to do so. Over the past three years, Austin's average annual lodging rates have increased by over four percent and are expected to continue to increase for the next three years.[34]

In the MSA, full service lodging rates average $173 per night, and limited service lodging rates average $87 per night, both of which are higher than other regional and national averages. In early 2015, the hotel occupancy rate for full service lodging was 73.8 percent, and is expected to increase throughout 2015.

Downtown Austin, the most relevant sub area for this market overview, has 7,400 available hotel rooms, with about 2,100 rooms under construction. The average downtown hotel occupancy rate is 79.3 percent, with an average daily hotel rate of $203.86. Exhibit 10 shows hotel occupancy and revenue per available room both citywide and in the Central Business District (including SCW hotels) from 2001 to 2014. Both geographies show increases in occupancy and revenue after slight recession dips.[35]

Exhibit 10. Austin Hotel Occupancy and Revenue Per Available Room (RevPAR)

Source: Downtown Austin Alliance, Austin Convention & Visitors (Bureau (http://www.downtownaustin.com/business/tourism)

New hotel development can be attributed to the improving economy, expansion of business, and increased recognition of Austin as a popular cultural destination.[36] A 2013 New York Times article discussed new hotel development in Austin, stating that eight new hotels, with nearly 4,000 rooms total, were set to be opened over the next three years. Specifically, the article cites

[28] Stream Realty.
[29] Integra Reality Resources-Austin, 2015 Mid-Year Viewpoint.
[30] Marcus and Millichap Austin Office Research Report.
[31] Integra Reality Resources-Austin, 2015 Mid-Year Viewpoint, Retail
[32] Integra Reality Resources-Austin, 2015 Mid-Year Viewpoint, Retail

[33] Texas Destinations 2013, http://www.travel.state.tx.us/getattachment/a6c4ad35-48ef-49ae-9bd7-df9231a2755f/2011-Hill-Country-Final.aspx
[34] Integra Reality Resources-Austin, 2015 Mid-Year Viewpoint, Lodging
[35] http://www.downtownaustin.com/business/tourism
[36] Integra Reality Resources-Austin, 2015 Mid-Year Viewpoint, Lodging

the JW Marriot Austin, a $300 million hotel with 1.2 million square feet, and the $350 million Fairmont Hotel.[37]

The study area has three hotels: The Hyatt Regency (448 rooms), Embassy Suites (261 rooms), and Extended Stay America (130 rooms). As of 2015, there are no planned hotels in the Study Area.

Government/Civic/Cultural Uses

A City presentation in 2015[38] outlined the steps now underway to address pressing city facilities needs for city office space. In particular, developing a program for a new development services center is a top priority.

One conventional approach to addressing city office needs would be to use the development capacity at One Texas Center (OTC), a city office building in the South Central Waterfront, that currently houses approximately 200K square feet. The city parcel at OTC has development capacity, under its PUD entitlement, to build an additional office tower and parking structure that would approximately double its current office and parking spaces.

This presentation also cited the new public-private partnership (P3) model for addressing facility needs which provides for shared risk, streamlined production, and innovative financing. ECONorthwest has had initial conversations with city staff to explore the potential of addressing the city office space, either at the OTC site or, potentially, in a P3 model within the SCW.

Implications

This section documents implications for each of the use types, based on the market analysis as well as additional discussions needed with the City before ECONorthwest finalizes development scenario use mixes. Since we will be developing scenarios for more robust development that would be enabled by right (if differing projected heights are allowed), we'll need to factor in development implications from increased land costs as well as construction costs.

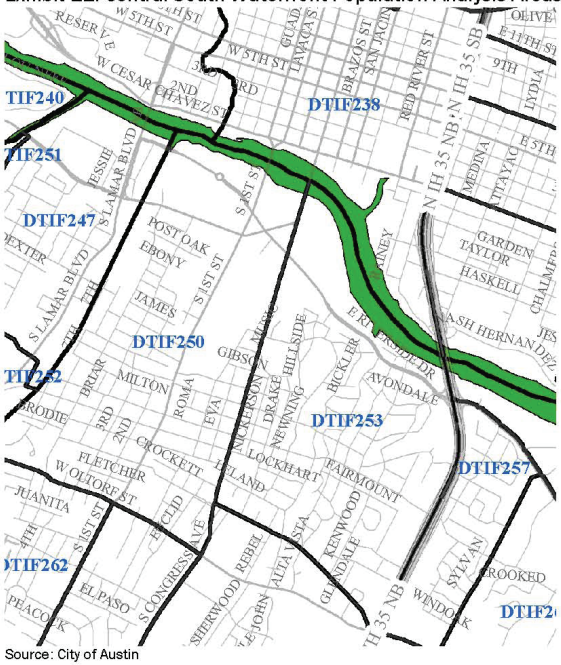
- **Multifamily residential**.
    - **Renter-occupied**. This area is likely to be an attractive location for new rental housing and has potential to offer both high and mid-rise rental product types. However, with so many units in the pipeline in Central Austin and the many limitations outlined above and detailed in our baseline scenario memorandum, our models will need to forecast a likely timeframe for unit absorption and provide implications for how those developments might be phased. In addition, given the goals of the SCW Initiative, we will need to develop models that integrate affordable and workforce housing at rates of at least 10 percent and preferably 20 percent or more of the unit mix.
    - **Owner-occupied**. Condominium developments could be a desirable addition to this area. Higher end units could be especially marketable along the waterfront. There is also potential for affordable and workforce condos (or co-ops) given the closing gap between monthly rents and monthly mortgage payments.
- **Office**. The South Central Waterfront already has a significant Class B and C office presence but has good potential to capture a large portion of future employment uses in Class A as well as new Class B buildings, given the area's location near downtown Austin. For the development pro formas, ECONorthwest will speak with real estate professionals in the area to explore how this area could become a more attractive destination for employment uses, among a mix of uses. We will look at development feasibility for creative and flex type office spaces to see if this area has the potential to serve a unique niche, in addition to capturing growth from larger existing companies and institutions.
- **Retail and other activating ground floor uses**. The City seeks active ground floor uses in the area. Our internal team will work with Austin real estate professionals experienced in these uses to determine the best way to model retail and other activating use in this area.
- **Hotel**. Considering the strong hotel market, it is likely that at least one of the alternative development scenarios will model a full service hotel as well as a limited service facility. These may be stand alone or mixed-use facilities.
- **Civic/institutional**. ECONorthwest will continue to engage city staff for guidance on developing scenario models that include civic and institutional uses in the South Central Waterfront.

[37] Shevory, Kristina. "Austin, Tex., Stands Out in Hotel Recovery That Has Hugged Coasts." The New York Times. http://www.nytimes.com/2013/10/02/realestate/commercial/as-travel-picks-up-hotels-gain-allure-for-investors.html?_r=0

[38] http://www.austintexas.gov/edims/document.cfm?id=233895 Presentation by the City's Strategic Facilities Governance Team to the City Council Audit & Finance Committee on May 27, 2015.

Appendix: Maps

Exhibit 11. Central South Waterfront Population Analysis Areas



Source: City of Austin

ECONorthwest
ECONOMICS • FINANCE • PLANNING

DATE: May 19, 2016
TO: SCW Project Team
FROM: ECONorthwest
SUBJECT: SCW Funding Evaluation

This memorandum summarizes the process to identify potential funding tools as part of the creation of the South Central Waterfront Framework Plan. It serves as a detailed appendix to the Framework Plan that can inform further discussions among City staff about the suitability of various funding tools for public realm improvements and affordable housing in the South Central Waterfront (SCW). It includes a preliminary assessment on funding programs that the City should continue to explore as it moves to implement the projects envisioned in the SCW Vision Framework Plan.

1 Projects and Programs

This section includes a high level description of projects.

Infrastructure

- **Open Space:** Waterfront park and plaza.
- **District Streets**: Major streetscape improvements on existing streets as well as a new street to serve the Cox and Crockett properties.
- **Local Streets:** Streets that provide access to specific sites.
- **Utilities**: Gas, sewer, water, and electricity service to the Cox and Crockett parcels.

Affordable Housing Program Goals

The City has identified a 20% target for affordable housing in the SCW, recognizing it is an ambitious policy goal that will require public-private partnerships and creative funding. While the market will largely determine how much of the SCW is redeveloped as residential versus commercial, the area's total build out should be capable of generating development driven public resources that can be combined with an array of other affordability incentives such as tax credits to achieve this target. While most of the affordable units will be rentals that serve households at 80%-120% MFI, there could be opportunities to provide rental units for households at 60% AMI as well as viable ownership opportunities.

2 Funding Evaluation

The City is strongly encouraged to undergo an internal process to evaluate which of these tools merit further consideration. We suggest that the City use the following criteria when evaluating these tools:

1. **Economic feasibility**. This category covers everything related to creating and maintaining net revenues. We break economic feasibility into four subcategories: (1) revenue-generating capacity, (2) administrative costs, (3) revenue stability, and (4) revenue flexibility:
    a. **Revenue-generating capacity** considers how much money the source can generate.
    b. **Administrative cost** considers the portion of gross revenues that will be spent on administration. The easier it is to administer the tax or fee, the more gross revenue collected will be available for transportation projects and programs in the corridor.
    c. **Revenue stability and predictability** considers whether the source is likely to avoid large fluctuations each year and whether the source is likely to be close to the forecasts analysts might make.
    d. **Revenue flexibility** considers limitations on the types of projects that can be funded with a given source. A funding source may be less useful to jurisdictions if its use is limited to certain types of projects.
2. **Fairness**. In the context of infrastructure and redevelopment funding, the key question related to fairness is "who pays?" A standard definition of fairness in public finance is the charges that fund the infrastructure system are tied to the users who receive benefits from (or impose costs on) the infrastructure system. Fairness may also be referred to as equity.
3. **Legality**. All the benefits of a funding source are moot if the source is not legal or cannot become legal within the desired timeframe. If the source is currently prohibited by State statute, then there is likely a considerable administrative hurdle to be surmounted up front.
4. **Political acceptability**. Will stakeholders accept or support the tool? Political acceptability considers whether elected officials and the public at large are likely to support the funding source. This largely depends to a large extent on the components described above: if a revenue source is legal, efficient, and fair, then it should have greater potential to get political support from the public, advisory groups, and decision makers.

Based upon the criteria identified above, ECONorthwest evaluated a range of possible funding tools to help achieve infrastructure and affordable housing objectives: development driven funding tools (tax increment financing, PID, impact fees, etc.), public funding (capital improvement funds, GO bond, philanthropy, etc.), as well as tax abatements/credits for

affordable housing. Exhibit 1 shows how each of the potential funding tools scored under the criteria identified above. The tools shown in green are part of the primary toolkit that are outlined in more detail in this appendix.

Exhibit 1. Funding Tools by Evaluation Criteria – Infrastructure and Affordable Housing

	Tool	Economic Feasibility					Fairness	Legality	Political Acceptability
		Capacity	Timing	Admin. Ease	Stability/ Predictability	Flexibility			
Infrastructure									
Public Tools	Tax Increment Financing	✚	✚	✓	✓	✚	✚	✚	✓
	GO Bonds	✓	✓	✚	✓	✚	–	✓	–
	CIP Funds	–	✚	✚	✓	–	✓	✓	✓
	Parking Partnership	✓	✓	✓	✓	✓	✓	✚	✓
	~~Sales Tax~~	✚	✚	–	✓	?	–	✓	–
	~~Utility Fee~~	✓	✚	–	✓	?	–	?	–
Private Tools	Public Improvement District	✓	✓	✓	✓	✚	✚	✚	✓
	Philanthropy	?	✚	?	–	✓	✓	✚	✚
	Transfer of Development Rights	✓	✚	✓	✓	–	✚	✚	✓
	~~Impact Fee~~	✓	–	✓	–	✚	✚	✓	–
Affordable Housing									
Affordable Housing	Housing Trust Fund	✓	✓	✓	✓	✓	✓	✓	✓
	Vertical Housing Development Program	✓	–	✓	–	?	✓	✓	✓
	Tax Credits	–	✓	✓	–	✓	✓	✓	✚
	Public Improvement District	✓	✓	✓	✓	✚	✚	✓	✓
	Tax Abatement	?	✓	?	–	?	✓	?	?
	REIT	?	?	?	?	?	✓	?	✓
	Preservation Strike Fund	?	?	?	?	?	✓	✓	?

Legend	
Good	✚
OK	✓
Unknown	?
Bad	–
Fatal Flaw	–

3 Preferred Infrastructure and Public Realm Funding Tools

This section provides a high level overview of the preferred funding tools identified in the last section. It presents an overview on how the tool could perform in the SCW. Should the City opt to move forward with a number of these tools, a more refined assessment will be required. Exhibit 2 shows which tools would apply to which project categories. The tools shown in green are part of the primary toolkit that are outlined in more detail in this appendix.

Exhibit 2. Funding Tools by Project Applicability

	Transportation Infrastructure	Parks	Affordable Housing
Publicly Funded			
Tax Increment Financing	●	●	
Parking Partnership	●		
GO Bonds	●	●	●
CIP Funds	●	●	
Tax Abatement			●
Housing Trust Fund			●
Vertical Housing Development Program			●
Privately Funded			
Public Improvement District	●	●	●
Philanthropy	●	●	●
Transfer of Development Rights		●	●
Low Income Housing Tax Credits			●
Real Estate Investment Trust			●
Preservation Strike Fund			●

3.1 Primary Toolkit

The primary toolkit identifies local funding tools that can fund public realm and infrastructure improvements in the area. The City will remain flexible to other potential funding tools that become available. In addition to the toolkit identified in this section, the City will explore state and federal funding tools for development and infrastructure projects on a project-by-project basis, including New Market Tax Credits, TIGER grants, HUD discretionary grants, Section 108 loans, and other state/federal grants and loans as applicable.

3.2 Tax Increment Financing (TIF) and Tax Increment Reinvestment Zone (TIRZ)

Tax increment financing allows a City or County to finance infrastructure improvements and support development to promote the viability of existing businesses and to attract new enterprises within a defined area. Chapter 311 of the Tax Code contains the statutes governing tax increment financing. Tax increment finance revenues are generated by the increase in total assessed value and newly generated sales tax in a Tax Increment Reinvestment Zone (TIRZ)

from the time it is first established. When the bonds are paid off the entire valuation is returned to the general property tax rolls. A TIRZ can collect both property and sales tax revenues:

- **Property Tax**: As property values increase in the district, the increase in total property taxes (i.e., City's and potentially the County's portion) can be used to pay off TIF bonds. In other Tax Increment Reinvestment Zones, the City of Austin has dedicated a portion of the tax revenue attributable to the increase in property values to servicing TIF debt. The remaining portion has been allocated to ongoing City services.
- **Sales tax**: A local government may designate a portion or amount of tax increment generated from municipal sales and use taxes that can be attributed to the zone, above the designated sales tax base (defined at the outset of the TIRZ), to be deposited into the tax increment fund.[1]

Within developed areas of the city or county, the criterion usually cited as justification for a reinvestment zone is that the area's present condition meets various measures of blight such as large amounts of undeveloped land, poorly platted parcels, insufficient infrastructure, significant numbers of substandard or deteriorating structures, etc. that substantially impairs the area's ability to grow.

Tax increment can also be invested in the form of low interest loans and/or grants for a variety of investments, though not all of these investments may be appropriate in the SCW:

- Infrastructure projects, including parks, streets, parking garages, streetscape improvements (including new lighting, trees and sidewalks).
- Land assembly for public as well as private re-use.
- Redevelopment projects, such as mixed-use, and others that generate economic development.
- Economic development strategies, such as capital improvement loans for small or start up businesses which can be linked to family-wage jobs.
- Facade preservation projects.

Evaluation Criteria

TIF meets the key criteria for funding evaluation, and warrants further discussion and exploration from the City. Our findings are detailed below:

Capacity: **Good**. The revenue capacity for a TIRZ is derived from its growth in assessed value and growth in the amount of sales tax once a district is created. The SCW currently has low assessed value with a great potential for redevelopment, a combination that could result in substantial revenues over time. ECONorthwest prepared a number of redevelopment scenarios in conjunction with the Asakura Robinson and McCann Adams urban design team. Using

[1] Texas Municipal League Economic Development Handbook, 2015. Page 95. http://www.tml.org/p/EconomicDevelopmentHandbook2015_TML.pdf

Scenario 1 that includes new development and "stable" existing development, ECONorthwest projected the City of Austin's portion of property tax revenues for full build out of this scenario at $14.7 million. This amount is nearly five times higher than the City's current property tax revenues from the SCW. **ECONorthwest did not project sales tax revenues or appreciation in property taxes for existing stable parcels, which could also be factored into a possible TIRZ in a more detailed feasibility study**.

Timing: **Good**. The ability to bond against TIF revenue is influenced by the value and timing of new development as well as appreciation rates of existing and new taxable developments. Even though the SCW would be a new TIRZ, there are several projects that are on the cusp of redevelopment that could help to jumpstart TIF.

Administrative Ease: **OK**. When creating a new TIRZ, Austin will need to undertake significant public process, alongside a reinvestment zone financing plan that includes findings of blight, a TIRZ boundary delineation, defined TIF eligible projects/programs, duration of the zone, projected product absorption, maximum indebtedness, bonding timeline, and securing the frozen property and sales tax base. The system for collecting property and sales taxes is already in place, and the City already has economic, finance and planning staff to support implementation. The City currently uses the process outlined in Texas Tax Code Chapter 311 for TIF and reinvestment zone creation that includes the following steps:

- Written Notice of Intent to create zone
- Publish Notice and conduct public hearing on zone creation
- Project and financing plans developed by Board and approved by City ordinance
- Notification to Travis County Appraisal District (TCAD)

Stability/Dependability: **OK**. Revenues are property tax and sale tax based therefore relatively stable. In some new TIRZs, however, revenues are not immediately available and are heavily dependent on growth in assessed value from new development. The SCW has an existing pool of appreciating taxable assets in addition to a number of projected new developments within the next few years.

Flexibility: **Good**. All capital projects located within the TIRZ and identified in the SCW Framework plan are eligible.

Legality: **Yes**. The SCW appears to meet the statutory definition of blight, and the type of infrastructure improvements needed in the area are eligible for TIF.

Political acceptability: **OK**. As described above, TIF and TIRZ have been used in Austin, suggesting that these should be politically acceptable.

3.3 Public-Private Partnership to Create Parking Facilities

The City currently receives revenues from on-street and publicly owned parking garages in other areas of the City. These funds can be used to float revenue backed bonds to construct and secure public ownership of district serving parking garages through a parking enterprise fund. This type of involvement serves multiple purposes:

- Provides parking facilities that serve multiple users
- Reduces the overall number of parking spaces needed in the district
- Provides revenues to the City
- Can make for-profit and non-profit redevelopment projects more viable by reducing the financial burden of building expensive structured parking that the development would otherwise need within each project.

City participation in parking facilities could achieve multiple benefits which include: reducing the need for more single use parking spaces, generating revenues for the City, providing more shared parking spaces within a district, and enabling for- and non-profit developers to invest more in uses that provide housing and jobs.

Evaluation Criteria

Capacity: OK. The City has built similar facilities in the past, and additional discussions are likely warranted.

Timing: **Good**. The City has an opportunity at the initiation of a redevelopment district to use the parking fund as part of development agreement negotiations with various property owners and developers. This could lead to partnered garage developments in which the City owns a portion of one or more larger garages.

Administrative Ease: **Good**. The City has a good track record with parking partnerships to date.

Stability/Dependability: OK. Each parking garage's success will depend on utilization, and the ability to achieve projected parking rates and related factors. Given the projected densities in the SCW, one or more district garages should perform well.

Flexibility: **Good**.

Legality: **Yes**. This has occurred elsewhere in the City.

Political acceptability: **Good**. Given previous successes and the potential benefits this brings to the SCW, it should receive political support. Other parking enterprise funds within the City include both street and structured parking revenues.

3.4 Public Improvement District

A PID is a special assessment district where property owners voluntarily commit to assess themselves a fee to fund capital improvements (streetscape enhancements, utilities, shared open space, etc.) and participate in contributing to achieving housing affordability goals. The City would first work with property owners to establish the PID, and could then sell bonds to finance the identified improvements and programs. Property owners within the PID would repay the bonds through annual payments assessed 1) equally per front foot or square foot, 2) according to the value of the property as determined by the city, with or without regard to improvements on the property; or 3) in any other manner that results in imposing equal shares of the cost on similarly benefitted properties within the PID.[2] The statute authorizing PIDs is found in Chapter 372 of the Local Government Code.

The PID may pay for any of the following[3]:

- Landscaping (including fountains, distinctive lighting and signs) and public art;
- Acquiring, constructing, improving, widening, narrowing, closing, or rerouting sidewalks, streets or any other roadways or their rights-of-way;
- Construction or improvement of pedestrian malls;
- Acquisition, construction or improvement of libraries; acquisition, construction or improvement of off-street parking facilities; rerouting of mass transportation facilities; and water, wastewater or drainage improvements;
- The establishment or improvement of parks;
- Acquisition, by purchase or otherwise, of real property in connection with an authorized improvement;
- Special supplemental services for improvement and promotion of the district, including services relating to advertising, promotion, health and sanitation, water and wastewater, public safety, security, business recruitment, development, recreation, and culture enhancement;
- Payment of expenses incurred in the establishment, administration, and operation of the district, including expenses related to the operation and maintenance of mass transportation facilities; and
- Development, rehabilitation, or expansion of affordable housing.

Evaluation Criteria

Capacity: OK. The revenue capacity for PIDs is dependent upon property owners' willingness to self-assess to cover infrastructure and other costs, and the size of the PID boundary. Both

[2] Texas Local Government Code, Chapter 372. http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.372.htm

[3] Local Economic Development Handbook, page 182.

variables require evaluation. Theoretically, a PID could generate significant amounts of revenue. Currently six parcels within the district fall into the existing downtown PID, and are assessed at a rate of $0.10 on the $100 valuation after the first half million (which is exempt). The City and property owners will have a choice whether to expand the current PID (and perhaps adjusting the rates) or create a new PID specifically for the SCW.

Timing: OK. PIDs allow municipalities to sell bonds to receive upfront funding for projects that are paid back over time. However, in the early years of the development, existing property owners will be carrying the cost burden. As the more robust development evolves, more significant PID revenues would be available.

Administrative Ease: OK. PIDs have relatively low ongoing administrative costs. However, establishing a PID requires significant property owner outreach.

Stability/Dependability: OK. PIDs are based on an agreed upon assessment per property among owners which are generally fairly stable. However, PIDs for an area like the SCW are dependent upon new development occurring to significantly increase the assessment base to pay back the initial bonds, reducing its predictability.

Flexibility: Good. PIDs can be used for capital improvements, programmatic activities, and affordable housing.

Legality: Yes. PIDs are legally allowed in Texas, and a portion of the SCW is currently in the downtown PID.

Political acceptability: OK. PIDs are widely used in the State of Texas. At the same time, the City would need to work with property owners to generate support for the projects identified in the PID program. A petition for a PID must contain signatures from property owners that "constitute more than 50 percent of all record owners of property that would be liable for assessment under the proposal OR own taxable real property that constitutes more than 50 percent of the area of all taxable real property that is liable for assessment under the proposal."[4] Discussions must also be held with the Downtown Austin Association as it manages the current PID that extends into the SCW.

Next Steps

- Identify potential PID eligible projects and programs and conduct detailed PID projections on project/program costs.
- Assess pros and cons of expanding the current downtown PID versus setting up a new PID to oversee the SCW, and decide which is more appropriate.
- Identify assessments required to achieve PID goals
- Complete the steps required for PID adoption, detailed in the Local Government Code Chapter 372. Improvement Districts in Municipalities and Counties (shttp://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.372.htm)

[4] Economic Development Handbook, page 183.

3.5 Philanthropy

Other cities have engaged in successful capital campaigns to raise private money to fund streetscape and park projects, as well affordable housing. These efforts typically fund plaza construction, street furniture, plantings, and light installations, as well as ongoing maintenance at times. They also fund various aspects of affordable housing (e.g., the Fred Meyer Trust in Portland, OR and the George Kaiser Family Foundation in Tulsa, OK have each undertaken programs to address housing affordability).

There may be several players (conservancies, foundations, and/or individuals) that would be interested in philanthropic contributions. Some may have interests in naming rights or sponsorships for public realm or affordable housing elements of the South Central Waterfront.

Evaluation Criteria

Capacity: Unknown. The current interests for philanthropic contributions are unknown, but could include civic-minded individuals, conservancies, local foundations, and area developers that recognize the benefits that such amenities bring.

Timing: Unknown. Timing for philanthropic contributions is unknown. The City or foundations could start a capital campaign that could include conversations about timing related to these improvements.

Administrative Ease: Unknown. Since foundations, conservancies, and generous community minded individuals will likely constitute the core of philanthropy, it would be helpful to explore setting up a structure through which resources can be funneled. For example, the City could work with local partners to form a "Friends of the Waterfront" organization.

Stability/Dependability: Unknown. Commitments for some projects can be made up front, while other contributions can come in based on success and needs of the area as it redevelops.

Flexibility: OK. Depending on the interests of the donors, philanthropic donations could go toward public realm improvements or affordable housing in the area.

Legality: Yes.

Political Acceptability: Good.

3.6 Transfer of Development Rights

Transfer of development rights (TDR) is a market-based technique that encourages the voluntary transfer of growth from places where a community envisions less development (called sending areas) to places where a community would like to see more development (called receiving areas). Austin has previously worked with TDRs related to environmental preservation. TDRs in the SCW can be crafted as a means to help secure open spaces or to assist with providing sites for affordable housing.

Creating TDRs in Austin requires establishing a plan area in which they can be implemented. The SCW Framework Plan could serve as the document that enables potential TDRs.

Evaluation Criteria

Capacity: **Good**. There could be a number of sender sites that provide community benefits in the form of open spaces and affordable housing.

Timing: **Good**. Establishing TDR potential as part of the Framework Plan could assist the City in bringing more support for the Plan from property owners as well as interest groups such as those supporting more open space and affordable housing.

Administrative Ease: **OK**. The City has arranged TDR structures in the past and has existing legal and programmatic experience with setting up TDR programs.

Stability/Dependability: **OK**. The value of a TDR Program will be influenced by market timing (need to sell and purchase TDRs as well as costs) and its ability to address development needs in the SCW.

Flexibility: **OK**. The City will need to determine eligible receiving areas and specific eligible uses on sender sites including open space and affordable housing.

Legality: **Yes**.

Political acceptability: **OK**. This assumes that the City can show that the TDR program is a viable market-based way to help achieve desired public outcomes.

4 Affordable Housing Tools

The City and its partners are exploring the development of a preliminary toolkit for affordable housing in the district, shown in Exhibit 3.

Exhibit 3. Funding Tools by Project Applicability

	Preliminary Toolkit	Exploratory Toolkit
Publicly Funded		
Housing Trust Fund	x	
Vertical Housing Development Program	x	
Tax Abatement		x
Preservation Strike Fund		x
Privately Funded		
Low Income Housing Tax Credits	x	
Public Improvement District		x
Philanthropy		x
Transfer of Development Rights		x
Real Estate Investment Trust		x

Preliminary Toolkit

- **Housing Trust Fund (HTF)**. In 2015, Austin City Council made a decision to increase the amount of revenue directed to the HTF. Previously, only 40% of the increment from formerly publicly-owned properties was going into the fund. Now, 100% is going into the HTF. That could produce a significant and sustainable source of funding for affordable housing.
- **Vertical Development Program**. This program allows for additional height in exchange for the commitment to include a percentage of affordable units at 80% of MFI. If combined with other incentives (like low interest loans through a potential PID financing program), this bonus would produce more units or a different mix of units.
- **Low Income Housing Tax Credits**. This program directs private capital toward the development and preservation of affordable rental housing for low-income households. Tax credits are awarded to eligible participants to offset a portion of their federal tax liability in exchange for the production or preservation of affordable rental housing. Both the 9% and 4% credits can be pursued for affordable housing in the SCW. These credits can also be supplemented with TIF participation. For example: The Housing Authority has been successful with securing 4% tax credits and partnering with private developers to create more affordable housing (through its subsidiary, Austin Affordable Housing Corporation). HACA typically owns the land, thereby securing tax exempt status, and leases to the partnership. Exemption can reduce operating expenses in the 20% range, thereby enabling lower rents.

Exploratory Toolkit for Affordable Housing

- **Public Improvement District**. The development, rehabilitation, or expansion of affordable housing is an allowed use in a PID, and should be further explored in a PID Feasibility Study.
- **Real Estate Investment Trust**. The Trust would be a vehicle that would allow local investment in the SCW's affordable projects.

- **Tax Abatements**. The City allows tax abatements for non-profit owned affordable housing and are limited to the City's portion (20%) of the total property tax. The City will continue to explore expanding tax abatements for privately developed/owned affordable units that are part of mixed-income developments.
- **Preservation Strike Fund**. In 2014, the City recommended implementation of a preservation strike fund that was identified in HousingWorks' 2014 report, "Taking Action: Preservation of Affordable Housing in the City of Austin." The fund can be used to acquire sites for affordable housing. The City is working on development of a sustainable economic model for the fund, a determination of a fund structure and a framework for the housing portfolio, and options for seeding the fund. This fund could provide seed money for the development of housing that meets fund criteria within the SCW.

ECONorthwest
ECONOMICS • FINANCE • PLANNING

DATE: May 18, 2016
TO: SCW Team
FROM: ECONorthwest
SUBJECT: SCW SCENARIO EVALUATION MEMORANDUM

This memorandum provides an overview of the development feasibility methodology that ECONorthwest used to show potential development outcomes based on different regulatory, market, and physical assumptions in the South Central Waterfront (SCW). The results of this analysis were used in a set of discussions with key stakeholders and staff to evaluate tradeoffs and levels of funding necessary to realize the vision for the SCW.

1 Methods

Our process involved two steps: (1) Confirm existing entitlements and (2) residual land value analysis.

Step 1: Confirm Existing Entitlements

ECONorthwest worked with McCann Adams and the City of Austin to confirm existing entitlements in the area. An overview of those entitlements is included in Attachment 1.

Step 2: Residual Land Value Analysis

Our model is a district wide pro forma based on assumptions gathered from local developers/brokers, Austin's ULI mixed use council, and entitlement assumptions from City staff. This model allows for flexibility to:

- Adjust funding assumptions: debt/equity ratios, interest rates and terms, and alternative financing (e.g., PID, LIHTC, etc.)
- Program building use, including designating a primary and secondary use
- Configure parking type and associated costs

To test the financial feasibility of different development types in the SCW, ECONorthwest conducted pro forma analyses for each site using a *residual land value (RLV) analysis*. This analysis is based on a simple economic concept: land value is a surplus after estimated development costs (including expected profit) have been subtracted from the estimated value of the completed development. Real estate practitioners use this method to value the potential of land, in the absence of comparable sales. ECONorthwest used three steps to complete the analysis for each scenario:

Step 2.1: Gather Assumptions

ECONorthwest gathered assumptions for the following inputs:

- **Use Mix**: Working within the allowed uses under current zoning for the SCW, ECONorthwest and McCann Adams identified a set of development programs based on findings from the market assessment and conversations with local real estate and planning professionals. The use types explored in this analysis include market rate residential, affordable residential, hotel, office, and retail.
- **Entitlements**: Each scenario assumes a different set of entitlements across the SCW. ECONorthwest relied on the City of Austin to provide information regarding existing Planned Unit Developments (PUDs) in the area, as well as existing setbacks and overlays. The section for each scenario provides information on entitlement assumptions.
- **Development Costs**: To obtain information on development costs, operating costs, operating revenue, and other market assumptions, ECONorthwest interviewed local developers, including a panel from the Urban Land Institute. These are summarized in Attachment 3.
- **Infrastructure Needs and Costs**: Attachment 2 provides information on planned infrastructure improvements in the SCW.

Step 2.2: Determine Feasibility Gap

The residual land value analysis calculates the construction costs, project revenue, and profit for all hypothetical projects in each scenario. ECONorthwest's model calculated the expected return on cost. The difference between the predicted actual return on cost and the assumed rate of return desired by investors created a *feasibility gap*. For example, if the actual return on cost was 6% and the desired was 8%, the resulting gap would be two percentage points.

Step 2.3: Calculate Residual

The residual (or remaining amount) indicates how much a developer would be willing to pay for the property after all other costs have been accounted for in project (including profit margin). ECONorthwest then calculated the *residual land value*, that is, the value the land must cost per square foot to reduce the feasibility gap to 0%.

- If the residual is too low (under market value), the project would not be financially feasible.
- If the residual land value is equal to or above market value for land, the development would be financially feasible.

2 Baseline Scenario

The purpose of the baseline scenario is to show the scope and scale of development that could happen in the SCW over the next five to seven years without any intervention from the City of Austin beyond planned capital improvements. The Baseline does not assume development would fund any additional infrastructure in the area, beyond a few circulator roads, at a minimum that would need to be built in order to split up some of the largest parcels (which are not included in the site costs). Of the approximately 96 total parcel acres[1] in the study area, the Baseline assumes that 49 acres have the potential to develop and 47 acres do not redevelop.

2.1 Assumptions

Developing the Baseline required assumptions for 1) entitlements most logical to assume for the area, 2) the sites most likely to redevelop, 3) use mix, and 4) development costs/revenues.

Entitlements

The Baseline assumes that existing zoning requirements and PUDs remain in place. This section provides a summary of these requirements, with more information in Attachment 1. All parcels in the study area are in Commercial Services District (CS), LI: Limited Industrial Services (LI), or Planned Unit Development (PUD) zones. For the Baseline, the following regulations remain in place:

- **Heights**: A 60′ to 96′ height limit exists in most of the district, with some exceptions due to PUDs and overlays. PUDs allow for different heights on a site-by-site basis.
- **FAR**: The maximum FAR that ranges per site from 0.8 to 8 (base zoning) and 1.28 to 12.8 (increase allowed with residential). The variation is partially due to several existing PUDs.
- **Setback requirements**. There are varying setback requirements depending on the site.
- **Parking ratios**. The proposed use dictates the parking ratio. The current ratios are detailed in Attachment 3. For some buildings, the Baseline assumed ratios that were lower than what the code requires (1 space per 275 per square feet of office).
- **Existing South Shore Waterfront Overlay**. This district specifies primary and secondary setback lines from the Town Lake Shoreline and East Bouldin Creek as well as maximum height limitations.
- **Vertical Mixed Use (VMU) program**. VMU is an optional development bonus program, which requires at least one of a building's floors contain residential dwelling units in exchange for relaxed dimensional standards applicable in the base zoning district. If VMU Buildings are approved through the opt-in/opt-out process and take advantage of the dimensional and/or parking exemptions, they are subject to a requirement that ten percent of the residential units shall be affordable for households earning no more than 80 percent of the current Median Family Income.

[1] Developable land not including streets.

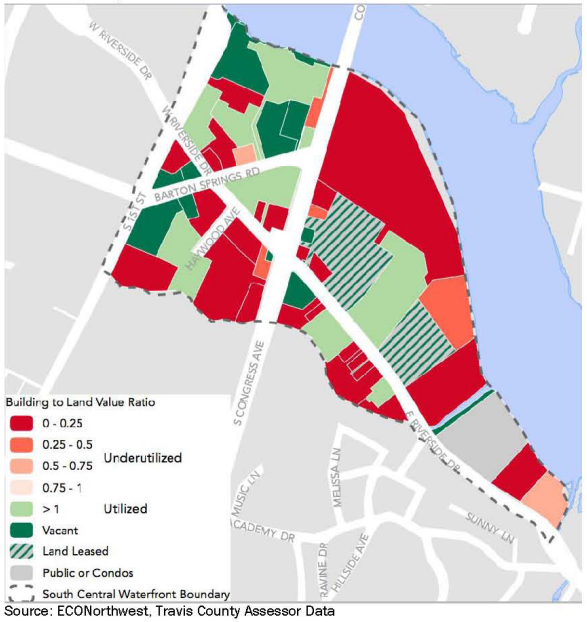
- **Existing PUDs**. The Baseline assumes that these existing PUDs will stay in place.

Sites

This section provides a brief overview of how the team identified sites for inclusion in the Baseline. ECONorthwest worked with the City of Austin to develop a set of criteria for determining which sites are likely to see development over the next five to seven years if no other City investment were to occur. The key criteria used to identify sites for additional study were:

- **Underutilization** – The site has significantly less development than what it is entitled for, and/or its improvement to land value ratio is also less than 1:1. Our assessment is shown in Exhibit 1.

Exhibit 1. Improvement to Land Value in the SCW

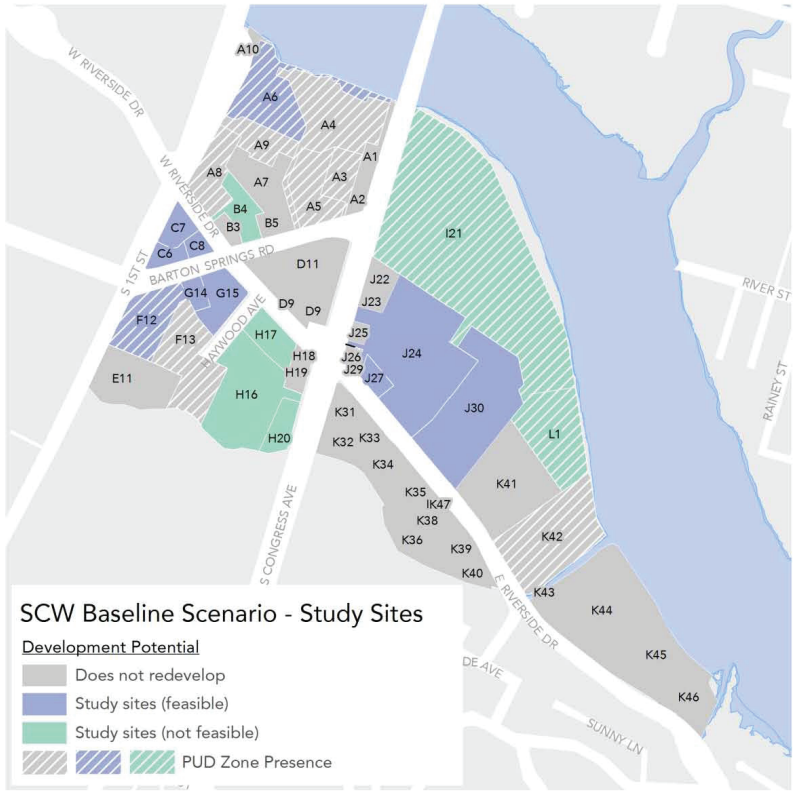


Source: ECONorthwest, Travis County Assessor Data

- **Interested property owner** – The City and consultant team had initial conversations with area property owners to gauge whether their site was likely to redevelop in the short to medium term under existing zoning regulations and allowed uses.
- **Existing entitlements** – In the Baseline, ECONorthwest assumed that existing zoning or PUDs would remain. In some cases, those entitlements limit the ability for properties to redevelop.
- **Site size/configuration** – The project team looked for sites that would limit the amount of assembly among separate property owners.
- **Assumed continued market demand for these product types in core area.**

Exhibit 2 shows the baseline study sites.

Exhibit 2. Baseline Study Sites



Source: ECONorthwest

Use Mix

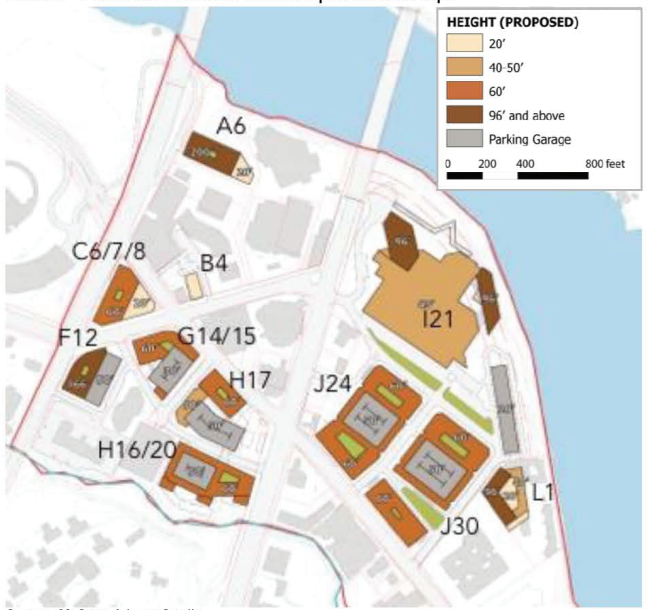
ECONorthwest worked with the City of Austin and McCann Adams to determine development programs for each of the study sites that fit within the existing zoning requirements as well as existing market needs. The sites in the Baseline are a mix of office towers, mixed-use office buildings, and multi-family residential buildings with ground floor retail. Exhibit 3 shows an overview of the Baseline built form, including height, FAR, square foot by development type, and parking spaces.

Exhibit 3. Baseline Scenario Physical Assumptions

Parcel	A6	B4	C6/7/8	F12	G14/15	H16/17/20	I21	J24/27/30	L1	Total
Use	Office	Office	Office	Office	Office	MF/Office	Office	MF/Office	MF	
Acres	3.7	1.0	1.0	1.7	1.6	6.1	18.9	11.5	3.0	48.7
PUD?	Y			Y			Y		Y	
Entitlement Assumptions										
FAR	2.4	0.4	2	2.7	2	1	0.8	3	1.3	
Height (Stories)	13	3	4	15	5	3 to 5	1 to 6	5	9	
Use Mix										
Office SF	360,000	14,000	110,000	187,200	125,000	120,000	660,000	140,000	0	1,716,200
Hotel SF	0	0	0	0	0	0	0	0	0	0
Retail SF	20,000	5,000	7,000	10,800	10,000	15,000	0	93,000	0	160,800
Residential SF	0	0	0	0	0	200,000	0	560,000	163,000	923,000
Residential Units	-	-	-	-	-	*235*	-	*659*	*192*	*1,086*
Total SF	380,000	19,000	117,000	198,000	135,000	335,000	660,000	793,000	163,000	2,800,000
Parking										
Surface	0	50	0	0	0	0	0	0	0	50
Structure	0	0	167	472	225	654	1,581	1,546	120	4,765
Underground	170	0	83	188	0	0	0	0	120	561
Total Spaces	170	50	250	660	225	654	1,581	1,546	240	5,376

Exhibit 4 shows the baseline development concept, including building height and site configuration.

Exhibit 4. Baseline Scenario Development Concept



Source: McCann Adams Studio.

Development Costs/Revenues

ECONorthwest worked with local development professionals (including the ULI) to gather assumptions for all building types, as detailed in Attachment 3. A few specific assumptions include:

- **Site preparation**: no demolition, site preparation, or infrastructure costs.
- **Construction costs**: hard (including TI allowances where appropriate) and soft costs.
- **Rent levels**: at the existing level (2016) and would increase over time.
- **Development financing**: elements such as equity levels, loan terms, coverage ratios, among others.

2.2 Findings

As described in the methodology section, ECONorthwest used a residual land value analysis to determine development feasibility of the program shown in Exhibit 5

Exhibit 4. The land values were calculated as residual land values, which in some cases differ significantly from the range of market values suggested by various representatives in Austin's real estate field. This is due to the specific development program modeled on each site, and development feasibility associated with those hypothetical buildings. Exhibit 5 shows the financial results for the Baseline. Given current market land values of $125 to $150 per square foot, the parcels most likely to see redevelopment under existing zoning and market conditions are A6, C6/7/8, G14/15, and J24/27/30, and F12. We targeted a threshold of $100 per square foot for development feasibility, acknowledging that some parcels would likely see development at lower land values, given property owner interests or priorities.

Exhibit 5. Baseline Scenario Financial Results – New Development

Parcel	A6	B4	C6/7/8	F12	G14/15	H16/17/20	I21	J24/27/30	L1	Total
Use	Office	Office	Office	Office	Office	MF/Office	Office	MF/Office	MF	
Acres	3.7	1.0	1.0	1.7	1.6	6.1	18.9	11.5	3.0	48.7
PUD?	Y			Y			Y		Y	
Entitlement Assumptions										
FAR	2.4	0.4	2	2.7	2	1	0.8	3	1.3	
Height (Stories)	13	3	4	15	5	3 to 5	1 to 6	5	9	
Use Mix										
Office SF	360,000	14,000	110,000	187,200	125,000	120,000	660,000	140,000	0	1,716,200
Hotel SF	0	0	0	0	0	0	0	0	0	0
Retail SF	20,000	5,000	7,000	10,800	10,000	15,000	0	93,000	0	160,800
Residential SF	0	0	0	0	0	200,000	0	560,000	163,000	923,000
Residential Units	-	-	-	-	-	235	-	659	192	1,086
Total SF	380,000	19,000	117,000	198,000	135,000	335,000	660,000	793,000	163,000	2,800,000
Parking										
Surface	0	50	0	0	0	0	0	0	0	50
Structure	0	0	167	472	225	654	1,581	1,546	120	4,765
Underground	170	0	83	188	0	0	0	0	120	561
Total Spaces	170	50	250	660	225	654	1,581	1,546	240	5,376
Development Cost										
Building Cost	$115 M	$5 M	$36 M	$78 M	$38 M	$84 M	$203 M	$191 M	$36 M	$787 M
Percent Financed	65%	65%	65%	65%	65%	65%	65%	65%	65%	-
Financial Results										
Return on Cost	8.1%	8.7%	8.1%	8.1%	8.2%	7.5%	8.0%	7.6%	7.0%	-
Building Value	$180 M	$8 M	$51 M	$107 M	$58 M	$123 M	$298 M	$275 M	$49 M	$1,148 M
Total Land Value	$33 M	$2 M	$6 M	$9 M	$9 M	$13 M	$38 M	$27 M	$2 M	$138 M
Total Value (Land + Building)	$213 M	$9 M	$57 M	$115 M	$66 M	$136 M	$336 M	$302 M	$52 M	$1,286 M
Residual Land Value / SF	**$201**	**$38**	**$102**	**$115**	**$130**	**$50**	**$46**	**$105**	**$18**	

The key factors that are driving these outcomes are:

- **Achievable rents**. The current market does not support new development of low density office and residential product types.
  - **Office**:
    - B4: This lower density, three story office building is the only parcel that is parked with surface parking which limits the density available on this site, given building costs.
    - I21: Maximizing development outcomes on this site given the existing PUD forces, the development of a 1,581 space parking garage, which drives down development feasibility.
    - B4, C6/7/8 and G14/15: These three to five story office developments achieve lower rental rates, but still pencil given their parking configurations and heights. If these parcels developed as taller office towers, they could achieve higher rents and thus higher land values. The possibility for higher net operating income in the form of higher rents increases the likelihood of redevelopment on a site.
- **Residential**: Lower density residential developments also achieve lower rents than would be possible in a higher-density, amenity rich urban environment. Projects with a

multi-family component achieved lower RLV than similarly scaled office developments in this area, given the interplay between development costs and achievable rents.

    - L1. This site was modeled with 192 units and 240 total parking spaces (half of which were underground). The achievable rents for this building do not support the cost to build and operate a parking structure, especially with underground parking.

- **High parking ratios**. The high parking ratios are one of the key drivers of feasibility for the Baseline.
    - The Hyatt PUD office parcel (A6) had the highest residual land value of $201 because it was modeled to share existing parking at the Hyatt Hotel. Without having to provide the full amount of parking to support this new development, this site can achieve the highest residual land value. This parcel has 170 parking spaces for 380,000 square feet of development, or one space per 2,000 square feet.
    - As a comparison, a smaller 1.7-acre parcel, F12, assumes a 15 story office tower. Requiring this office development to park itself drives RLV down to $115 per square foot compared to the higher numbers that A6 achieves. B4, a three story office building with surface parking, has low development feasibility due to the presence of surface parking, which is a relatively inefficient use of land given the high land values in this area.
- **Density**
    - There is wide spread in RLV between some of the developments with the same mix of uses and with similar heights. This is due to the assumed Floor Area Ratios (FAR) on those parcels. Sites H16/17/20 and J24/27/30 have a similar mix of office and residential uses, but the J sites have an FAR of 3 compared to the H sites with an FAR of 1. All else equal, a site with higher density will have higher residual land value and the sites with lower density will have lower residual land values compared to similar development programs.

3 Test Scenario

The purpose of the Test Scenario is to show the scope and scale of development that could occur in the SCW if the City and private partners participated in a shared investment in the public realm of the South Central Waterfront and committed to an ambitious affordable housing target.

3.1 Assumptions

Developing the Test Scenario required assumptions for 1) entitlements most logical to assume for the area, 2) the sites most likely to redevelop, 3) use mix, and 4) development costs/revenues.

Development Program

The Test Scenario assumes that the City would allow current property entitlements to change if local land owners were to partner in the creation of a robust public realm. This scenario assumes:

- **Increased heights**: A maximum height of 400 feet could be permitted on some sites. Many sites have buildings reaching 21-26 stories.
- **Increased FAR**: FAR reaches 8.5.
- **Existing South Shore Waterfront Overlay setbacks remain in place**. This district honors primary and secondary setback lines from the Town Lake Shoreline and improves water quality measures and stormwater infrastructure where East Bouldin Creek setbacks are encroached upon.
- **Some existing PUDs remain, while others allow additional development**.

Sites

This scenario assumed that the same sites would develop as the baseline study sites, as well as additional sites that did not achieve the minimum required residual land values ($100). Additionally, some of the larger parcels were subdivided to allow for increased density that is not permitted under the current entitlements. Therefore the number of overall sites for development increased, as well as the density, total development square footage, and value of the land and structures.

Use Mix

ECONorthwest worked with the City of Austin and McCann Adams to determine development programs on each of the study sites. The sites in the Test Scenario are a mix of office towers, mixed-use office buildings, and multi-family residential buildings with ground floor retail. See Attachment 4 for an overview of built form, including height, FAR, square foot by development type, and parking spaces. Exhibit 6 shows the Test Scenario development concept, including building height and site configuration.

Exhibit 6. Test Scenario Development Concept

Source: Asakura Robinson

Development Costs/Revenues

ECONorthwest worked with local development professionals (including the ULI) to gather assumptions for all building types, as detailed in Attachment 3.

Public Improvement District Assessment

Each of the parcels includes an assumed cost associated with a Public Improvement District (PID) that is assessed as a $10 per square foot of gross development. The PID fee is intended to cover a portion of public realm and affordable housing costs[2].

3.2 Findings

As described in the methodology section, ECONorthwest used a residual land value (RLV) analysis to determine development feasibility of the program shown in Exhibit 6. The land values were calculated as residual land values, which in some cases differ significantly from the range of market values suggested by various representatives in Austin's real estate field due to the specific development feasibility associated with the development program modeled on each site. Attachment 4 includes a table showing the findings by site.

The key factors that are driving these outcomes are:

[2] For the purpose of the model, the PID was assumed as a $10 per parcel up front cost. It is likely that the PID would be assessed as a yearly fee at an amount less than $10, therefore the residual land value estimates are conservative. The PID would need to generate enough annual income to support the bonding capacity to finance the improvement costs early on in the phasing of the development program.

- **Achievable rents**. The current market could support new development of higher density office and residential product types.
  - **Office**: C2, a 22 story office tower, has a RLV of $90 PSF, which is below the target for the area. This is due to the lower density, amount of underground parking programmed on the site, and high site specific infastrucuture costs.
  - **Hotel**: On S2, we modeled a full-service, 24-story hotel and found that it would likely perform well in this area, given the high Average Daily Rates in Central Austin. Our analysis found a residual land value of $400 per square foot for a high rise hotel[3].
  - **Residential**:
    - **Waterfront rents:** As an alternate scenario, we modeled higher rents at $3.25 per square foot on waterfront residential towers (S3, S4, S5), an increase of $0.15 per square foot over the average modeled through the district. This higher rent is an ambitious target that would require a commensurate investment in building and district amenities.
    - Site L1 was modeled with similar parameters as the baseline scenario. The extremely low residual land value ($3 per SF) is due to the small building footprint and low density of this project.
- **High Parking Ratios/Underground Parking**
  - The Test Scenario assumed lower parking ratios than the Baseline Scenario.
  - While underground parking is preferable from an urban design standpoint, it is very expensive. To help make projects pencil, we opted to model podium parking in some cases.
  - Shared parking arrangements that could capitalize on varied usage by different development types would likely provide increased flexibility for developers.
- **Affordable Housing using a hypothetical Public Improvement District Assessment estimate**
  - We used a target of $125 per square foot as a residual land value to determine the subsidy needed to meet a district target affordable housing set aside. The per unit subsidy varied greatly by construction type:
    - For H16/17/18, the analysis assumed that two buildings would be built on site, one of which would a wood-frame project that would include units affordable to households at 80% of Area Median Income (AMI), unless LIHTC's are involved. The per unit subsidy required for 86 affordable units in that project would be $50,000.

[3] The hotel RLV was not calculated using a return on cost feasibility metric similar to the other parcels due to limited data availability. Using market data and industry standard land to value ratio's, the parcel can support the indicated RLV and achieve the minimum desired financial return

- For high rise developments on C1 and C3, the analysis found a need for a subsidy of $280,000 and $300,000 respectively per unit affordable to households at 80% of AMI. The cost of construction for high rise buildings is much greater than for stick built lower rise products. Therefore, the subsidy required to achieve the targeted RLV is more than 5 times greater per unit for high rise construction.
- For F12, we found a need for a $27,000 per unit subsidy if the One Texas Center site redeveloped as an entirely affordable project at an 80% of Area Median Income (AMI) target, assuming $0 cost (RLV) is associated with the parcel. If the site were able to obtain Low Income Housing Tax Credits, the depth of affordability could go to 60% of AMI.

4 Scenario Comparison

Exhibit 7 shows the differences in the mix of land uses between existing conditions, the Baseline, and the Test Scenario. Both the Baseline and the Test Scenario add market rate housing units, office square footage, retail square footage, and parking spaces, with the Test Scenario adding almost double of each.

Exhibit 7. Scenario Summary – All Development

Component	Unit of Measurement	Existing Total	Stable Sites + Baseline Total	Stable Sites + Feasible Baseline Total	Stable Sites + Test Scenario Total
Housing	units	1,297	2,168	1,956	4,162
Market Rate	*units*	1,297	2,168	1,956	3,635
Affordable	*units*	-	-	-	527
Office	SF	1,225,332	2,252,274	1,874,631	3,405,306
Retail	SF	128,181	258,145	240,973	403,209
Hotel	rooms	839	839	839	1,264
Total Development	**SF**	**3,216,972**	**5,138,133**	**4,539,063**	**8,535,869**
Parking Spaces	spaces	7,465	10,399	8,853	14,520
Parks	acres	4.3	4.3	4.3	20

Note: Baseline assumes all parcels are developed regardless of financial feasibility. Stable sites have existing develop that would not redevelop in either scenario.

Exhibit 8 shows net new developed space for the Baseline and Test Scenario. New parking in the Baseline Scenario and the Test Scenario is all structured whereas existing condition is overwhelmingly surface level parking. Key differentiators in the use mix of Test Scenario include the addition of 527 affordable units (a 20% share of new units)[4], a 425-room hotel, and 20 acres of parks and open space.

[4] Test Scenario is illustrative and projects 3,080 new housing units. If the goal is that 20% be affordable that number would be 527. It's very probable that actual housing build out will be more or less than this scenario and that while the 20% affordable target will remain, the actual number of units will be different.

Exhibit 8. Net New Development

	Unit of Measurement	Baseline Total Net New Development	Feasible Baseline Total Net New Development	Test Scenario Net New Development
Housing	units	**1,086**	**659**	**3,080**
Market Rate	*units*	1,086	659	2,553
Affordable	*units*	0		527
Office	SF	1.7 M	922K	2.9 M
Retail	SF	160K	141K	345K
Hotel	rooms	0	0	425
Total Square Feet of New Buildings	**SF**	**2.8 M**	**1.6 M**	**6.2 M**
Parking Spaces	spaces	5,376	2,851	9,711
New Parks	acres	0	0	20 acres

Note: Assumes all parcels are developed regardless of financial feasibility

Building Program Build-Out Density and Uses

The Baseline and Test Scenario have key differences in height, FAR, and site coverage. Exhibit 9 shows the general differences between each scenario compared with existing conditions.

Exhibit 9. Development Assumptions Detail

	Existing	Baseline and Feasible Baseline	Test Scenario
Height Ranges	60-200 feet allowed.	1-15 stories. Generally, 3-9 stories. (The Hyatt parcel is 13 stories and F12 is 15 stories. The Statesman is 1-6 stories.	5-26 stories. Generally, between 7 and 21 stories.
Max Height	200 feet (Hyatt site)	200 feet (Hyatt site)	400 feet
Range of Floor Area Ratios	0.0-0.92	0.4-3.0	1.3-8.5

4.1 Financial Performance

Exhibit 10 shows development costs and financial results for the Feasible Baseline and two alternatives for Test Scenario: Test Scenario A and Test Scenario B. The key difference between Test Scenario A and B is that B assumes an increased market rent of $3.25 PSF for sub-parcels S3, S4, and S5 (versus $3.10 PSF in Test Scenario B). Building costs in the Test Scenarios are almost three times the amount in the Baseline and the block layout associated with that vertical development would also require a large outlay for site infrastructure and district public realm improvements. The total value (land and buildings) in the Test Scenarios are more than double the amount in the Baseline.

Exhibit 10. Financial Performance (New Development)

	Feasible Baseline*	Test Scenario	
		Test Scenario A	Test Scenario B
Development Cost			
Building Cost	$458 M	$2,050 M	$2,053 M
Parcel Infrastructure Cost	N/A	$28 M	$28 M
Hypothetical District Infrastructure PID Assessment	N/A	$63 M	$63 M
Financial Results			
Building Value	$670 M	$2,588 M	$2,593 M
Total Land Value	$83 M	$234 M	$245 M
Total Value (Land + Building)	$754 M	**$2,822 M**	**$2,838 M**

4.2 Fiscal Impacts

For fiscal impacts, ECONorthwest compared existing conditions, the Test Scenario, and the Feasible Baseline (which assumes that only study sites with a RLV of $100 per foot or more would redevelop). As of 2015, the SCW generated approximately $2.6 million annually in tax revenue to the City of Austin and $12.9 million total to all taxing districts (Exhibit 11).

In the Feasible Baseline, if just sites that had residual land values over $100 per square foot redeveloped, total tax revenues would be $26.2 million for all taxing jurisdictions, an increase of $13.2 million. In Test Scenario, total tax revenues would be nearly three times the amount in the baseline at close to $75 million.

Exhibit 11. Property Tax Revenues – Existing, Baseline, and Test Scenario
(Assuming Full Buildout, 2015 Dollars)

	Existing	Feasible Baseline*	Test Scenario
COA Tax	$2.6 M	$5.2 M	$14.7 M
Total Tax	$12.9 M	$26.3 M	$74.7 M

Note: *Sites with residual land value of $100+ PSF (A6, C6/7/8, G14/15, J24/27/30, F12) have different tax revenues in the Feasible baseline. Other study sites that do not pencil use existing values.

Attachment 1: Overview of Existing Entitlements

This section provides a reference for existing entitlements in the area as of 2015. This information was confirmed by the City of Austin prior to the creation of the Baseline.

Base Zoning

Parcels in the study area have the following base zoning classifications.

- CS-1: Commercial-Liquor Sales: Commercial Services District (CS), liquor sales permitted (1)
- CS-1-V-NP: Commercial Services District (CS), liquor sales permitted (1), vertical mixed use permitted (V), and located within an approved Neighborhood Plan (NP)
- LI: Limited Industrial Services: No residential uses permitted
- PUD: Planned Unit Development

The CS and LI zones do not currently permit residential uses, including condos and apartments (only residential uses allowed are two types of bed and breakfast)

Other Entitlements

There are additional entitlements that apply to most parcels in the area. They are:

Streetscape Design

Study sites fronting Congress Avenue, Riverside Drive, and South 1st street are subject to Subchapter E streetscape design standards: 7′ sidewalk, 8′ planting/street furniture zone.

Waterfront Overlay District[5]

Several parcels in the SCW are in Austin's South Shore Central Subdistrict.

- Primary setback lines:
  - 150′ landward from the Town Lake Shoreline
  - 80′ from East Bouldin Creek centerline
  - 35′ north of the northern public right-of-way boundary of Riverside Drive
- Secondary setback lines:
  - 50′ landward from the primary setback line parallel to the Town Lake Shoreline
  - 130′ from the primary setback line parallel to the East Bouldin Creek centerline
- Maximum Height
  - For structures located between the primary and secondary setback lines, the lower of 35 feet or the maximum height allowed in the base zoning district;

[5] Waterfront Overlay District Language

- For structures located south of Riverside Drive between South Congress Avenue and East Bouldin Creek, the lower 45 feet or the maximum height allowed in the base zoning district;
- For structures located within 100 feet of the right-of-way of South Congress Avenue or South First Street, the lower of 60 feet or the maximum height allowed in the base zoning district; and
- For structures located in all other areas of the subdistrict, the lower of 96 feet or the maximum height allowed in the base zoning district.

Additional Height Regulations

For sites adjacent to and oriented towards Riverside Drive, a building basewall is required, with a maximum height of 45′ if north of Riverside Drive and 35′ if south of Riverside Drive. The portion of the structure built above the basewall and oriented towards riverside drive must fit within an envelope delineated by a 70 degree angle starting at a line along the top of the basewall.

Vertical Mixed Use Overlay

This overlay is an optional development bonus program, which requires that at least one one of a building's floors contain residential dwelling units. If the developer opts in, a developer can meet more flexible dimensional and parking requirements, including minimum site area requirements, maximum FAR, and maximum building coverage.[6]

Minimum Parking Ratios

According to Austin City Code, parking requirements vary by use type. Exhibit 12 shows parking ratios for likely anticipated development types.

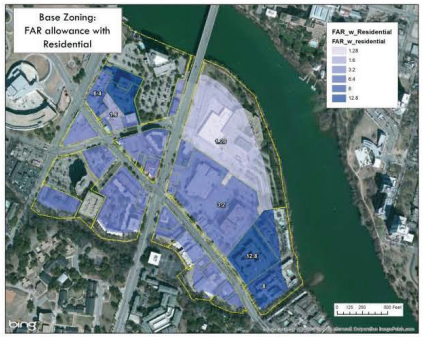
Exhibit 12. City of Austin Off-Street Parking Requirements by Land Use Type

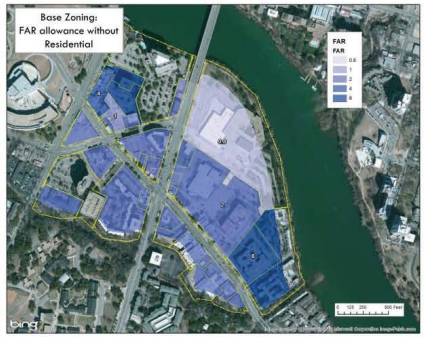
Land Use	Parking Ratio
Condo and multifamily	Efficiency dwelling: 1 space 1 BR: 1.5 spaces >1 BR: 1.5 spaces plus 0.5 space for each additional unit
General retail sales/services	1 space per 275 SF
Hotel-Motel	1.1 spaces per room
Office	1 space per 275 SF

Source: City of Austin Code. Appendix A: Tables of Off-Street Parking and Loading Requirements

[6] VMU Overview, 2010. https://www.austintexas.gov/sites/default/files/files/Planning/2010_vmu_overview.pdf

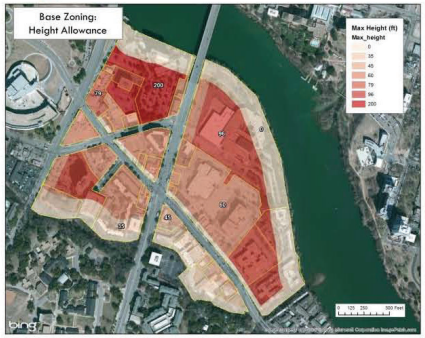
FAR

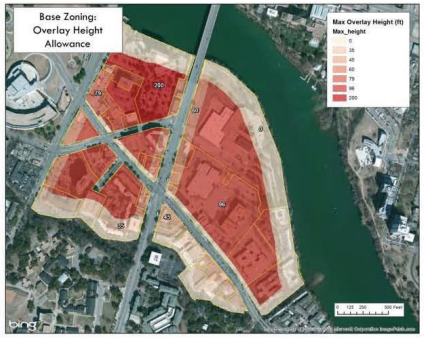




Impervious Coverage Limits

Height Limits





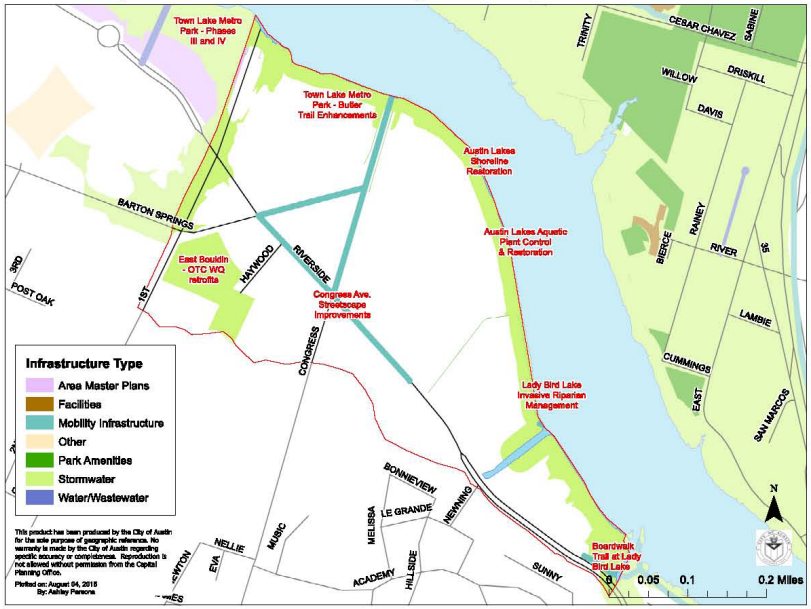
Attachment 2: Infrastructure Considerations

The City of Austin has identified a variety of infrastructure deficiencies in the South Central Waterfront Area. This section provides information about planning work done to date, as well as projects in the Five-Year Capital Improvement Program pipeline.

- 5-year CIP Plan and RNA mapped projects in SCW area
- Rolling Needs Assessment mapped projects in SCW area
- CIP Strategic Investment Areas map and associated list for SCW area

Most of these projects provide enhancements to existing facilities, so do not affect the creation of the Baseline. However, the design team will want to factor in these projects as they consider the infrastructure framework that will underlie the assumptions for the alternative scenarios. Exhibit 13 and Exhibit 14 provide additional detail about these projects.

Exhibit 13. 5-year CIP Plan Funded and Partially Funded Projects



Source: City of Austin.

Exhibit 14. Infrastructure Projects by City Department

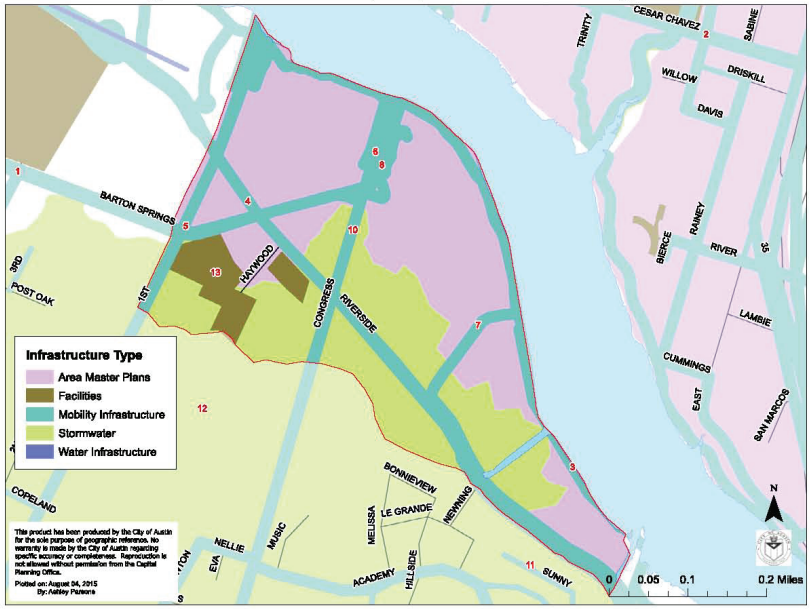
Name	Status, Phase	Description	Time line
Parks and Rec.			
Town Lake Metro Park - Butler Trail Enhancements	Anticip., Prelim.	Improvements to Ann and Roy Butler Hike and Bike Trail to be planned and executed collaboratively with stakeholders according to The Trail Vision Plan and Trail Enhancement Plan.	2015
Town Lake Metro Park - Phases III and IV	Active, Design	Master Plan bound by Lady Bird Lake to the north, Riverside Drive to the South, from the UPRR railroad on the west to South 1st street on the east. Including improvements to Auditorium Shores and potentially additions of art to Phase 2 of the park.	2014 to 2016
Boardwalk Trail at Lady Bird Lake	Active, Constr.	This project implements the construction of approximately a 7200 ft. boardwalk-style pedestrian and bicycle route along the south side of Lady Bird Lake, including a new restroom, ADA fishing pier and access trails.	2012 to 2015
Public Works			
Congress Ave. Streetscape Improvements	Active, Prelim.	Provide preliminary design and engineering for improvements related to pedestrian, bicycle, automobile, and transit mobility, and related to Congress Avenue's role as a central element in the public realm of downtown Austin.	2018
Watershed Protection			
Austin Lakes Aquatic Plant Control & Restoration	Active, Prelim.	Lady Bird Lake and Lake Austin are the object of continued native aquatic plant revegetation efforts recommended by TPWD. This project provides funding for COA participation in USACOE WRDA sec. 206 ecosystem restoration projects.	2019
Lady Bird Lake Invasive Riparian Management	Active, Prelim.	Assess extent of invasive species in LBL riparian zone through monitoring and mapping, develop and implement control methods, and revegetate with native plants.	2017
Austin Lakes Shoreline Restoration	Active, Prelim.	Improvement of Lady Bird Lake, Lake Austin and Lake Long shoreline to include planting native riparian vegetation, providing appropriate public access and viewpoints, as well as adding water quality improvements and erosion control.	2019
East Bouldin - OTC WQ retrofits	Hold, Post Const.	Installation of innovative green infrastructure to retrofit OTC with water quality controls. Phase 1 (complete) consisted of rain gardens. Phase 2 is in preliminary engineering to evaluate rainwater harvesting system and other potential retrofits.	2010 to 2011

Source: City of Austin.

Rolling Infrastructure Needs Assessment

Exhibit 15 and Exhibit 16 provide detail on the City's Rolling Infrastructure Needs Assessment. The Rolling Needs Assessment is an annually updated list of long-term and unfunded citywide CIP needs, organized by infrastructure type. This assessment provides detail on the types of ongoing capital improvements that the City must make to keep pace with services as well as strategic investments that have been identified as priorities through either department-level or city-level planning processes. Ongoing CIP program needs have been identified for addressing existing facilities and infrastructure as well as strategic initiatives that provide new or expanded services. Three key areas of long-range CIP need are transportation/mobility improvements, parks and recreation assets and city facilities.

Exhibit 15. Rolling Needs Assessment Projects (see table below for key)



Source: City of Austin.

Exhibit 16. Rolling Needs Assessment Projects by Department

ID	Name	Description	Responsible Dept.	Assessment Type	Urgent Need	FY START
1	Street Rehabilitation - Unfunded Needs	Street rehabilitation funding will be applied to address streets in poor (D) condition. The project planning approach incorporates coordination with other scheduled and pending work.	Public Works	Ongoing Program Funding Need	Yes	2016
2	Street Reconstruction - Unfunded Needs	The Street Reconstruction program is for full-depth street reconstruction of arterial, residential, and neighborhood streets with failed pavement throughout the City of Austin. Projects designed with prior bond funding will be considered a priority.	Public Works	Ongoing Program Funding Need	Yes	2016
3	Arterial Street Geometric Improvements	This program funds projects that respond to geometric mobility and safety improvement needs for arterial streets. Examples include intersection improvements, adding or extending turn bays and closing median openings where traffic issues exist.	Transportation	Ongoing Program Funding Need	Yes	2017
4	Advanced Transportation Management System (ATMS) - New	Advance Transportation Management Systems includes communications infrastructure and other equipment that enables staff to monitor and manage arterial street operations and provide information to travelers before and during their trip.	Transportation	Ongoing Program Funding Need	Yes	-
5	Corridor Mobility Master Planning/Preliminary Engineering Reports (PERs)	This program allows for periodic in-depth review of arterial corridor operations to assure roadway capacity and safety are optimized for all modes. Report results capture short, mid, and long-term improvements to traffic operations.	Transportation	Strategic Project Need	Yes	2016
6	Active Transportation Network Barrier Removal	Installation of bicycle and pedestrian facilities in locations where significant barriers in the network exist requiring street widening, constructing bridges or tunnels, adding or modifying signals, constructing traffic calming.	Transportation	Strategic Project Need	No	2016
7	Bicycle Facility Network Build Out with Street Maintenance Program	Installation of bicycle facilities in coordination with Street and Bridge Preventative Street Maintenance Program, covering the additional capital cost of making permanent changes to infrastructure such as rebuilding curbs, modifying medians, etc.	Transportation	Ongoing Program Funding Need	Yes	2016
8	All Ages and Abilities Bicycle Network	Installation of bicycle facilities intended for with protection or separation from motor vehicle traffic intended for all ages and abilities, including costs for constructing physically protected bicycle lanes & off-street bikeways/shared use paths	Transportation	Highlighted Project Need	Yes	2016
10	South Shore Central Master Plan	Construct public improvements that implement the South Shore Central Master Plan.	Planning and Development Review	Strategic Project Need	No	2018
11	BLU 1 Reach WQ Projects (Rolling Needs Assessment)	Stormwater Treatment BMP to address Water Quality problems identified by WPD Master Plan. Solutions may include traditional ponds or Innovative Green Infrastructure projects.	Watershed Protection	Strategic Project Need	No	2021
12	EBO1 Reach WQ Projects (Rolling Needs Assessment)	Stormwater Treatment BMP to address Water Quality problems identified by WPD Master Plan. Solutions may include traditional ponds or Innovative Green Infrastructure projects.	Watershed Protection	Strategic Project Need	No	2021
13	Public Works Facilities - Unfunded Needs	This ongoing program is to repair, renovate, and replace facilities and service yards that directly support Public Works service delivery by housing staff, materials, vehicles and equipment.	Public Works	Ongoing Program Funding Need	No	2016

Source: City of Austin.

Attachment 3: Development Assumptions

Residential

	Residential – rental, 60' (stick over podium) (Low)	Residential – rental 7+ story (Mid-rise and High-rise)	Residential – condo
Operating Revenues and Expenses			
Rent/Sales Price Per NSF	$2.50	$2.85 (mid) $3.10 (high)	$550 (avg. for downtown)- $700 highest end projects (Source: Terry Mitchell) Terry Mitchell's workforce project, NE side of downtown: $475/SF
Parking Revenue Per Space	$750 (surface) $1,500 (podium) $1,500 (underground) $1,500 (wrap)	$750 (surface) $1,500 (podium) $1,500 (underground) $1,500 (wrap)	$750 (surface) $1,500 (podium) $1,500 (underground) $1,500 (wrap)
Operating Cost Per SF	$5	$5 (mid) - $6 (high)	$0
OpEx Per NSF	36%	36% (mid) - 40% (high)	31%
Inflation Factor	3%	3%	3%
Development Cost	Assume wood frame	Assume steel and concrete	Assume steel and concrete
Average height/floor	10.5'	10.5'	11'
Square feet per Unit	850 (low)	850 (mid and high)	1,250
Unit Mix	Studio: 40% 1-bed: 30% 2-bed: 30%	Studio: 40% 1-bed: 30% 2-bed: 30%	
Gross to Net SF Ratio	75%	80% (mid) / 85% (high)	85%
Hard Cost Per GSF (w/o parking)	$120	$190 (mid) / $220 (high)	$225
Soft Costs as a percent of total costs	20%	20% (mid) 17% (high)	25%
Parking Requirements	1 parking space for the first bedroom and 0.5 space for each additional bedroom. 1 parking space for an efficiency dwelling unit (Source: Austin zoning code 25-2-1556) Several rental projects that decouple parking and charge $175-$200 extra per space per month.		1 parking space for the first bedroom ad 0.5 space for each additional bedroom. 1 parking space for an efficiency dwelling unit (Source: Austin zoning code 25-2-1556)
Parking Cost Per Space	$5,000 (surface) $25,000 (podium) $40,000 (underground) $15,000 (wrap)	$5,000 (surface) $25,000 (podium) $40,000 (underground) $15,000 (wrap)	$5,000 (surface) $25,000 (podium) $40,000 (underground) $15,000 (wrap)
Retail Construction Costs Per Square Foot	$130	$130	$130
Retail TI Allowance	$40	$40	$40
Contingency Costs (% of Total)	5%	5%	5%
Developer Fees (% of Total)	5%	5%	5%
Market Assumptions			
Vacancy	Total building: 4%	Total building: 4%	N/A
Cap rates	5.5%	5.5%	N/A
Percent of Condo Units Sold at Closing	N/A	N/A	85%, 100% sold after 6 months

Commercial

	60' Office (Low)	185' Office (Mid and High)	Retail (Ground Floor)
Operating Revenues and Expenses			
Rent Per NSF NNN, annual	$29	$32 (mid) $35 (high)	$35
OpEx Per NSF	$12	$15 (mid) $17 (high)	$35
Leasing Commission	Leasing commission is Austin is capped at 6% gross: 4% for tenant rep and 2% for landlord.		
Real Growth Rate	3.0%	3.0%	3.0%
Parking Revenue Per Space	Same as res	Same as res	Same as res
Development Cost			
Average Height Per Floor	12.5'	12.5'	18'
Hard Cost Per GSF	$125	$140 (mid) - $160 (high)	$130
Soft Cost Per GSF as % of Hard Costs	20%	20%	20%
Parking Cost Per Space	Same as res	Same as res	Same as res
Landscaping Cost	$0	$0	$0
Contingency Costs (% of Total)	5%	5%	5%
Developer Fees (% of Total)	5%	5%	5%
Tenant Improvement Allowance	$50	$50	$40
Retail Construction Costs PSF	$130	$130	$130
Market Assumptions			
Vacancy	Total building: 8%	Total building: 8%	Total building: 5%
Cap Rate	6.5%	6.5%	9%

Other Assumptions

Exhibit 17. Debt Service Assumptions

Interest Rate	6%
Loan to Value Ratio	0.7
Loan Amortization (Years)	30
Inflation Rate	3%


S1 280'
S2 400'
S1 300'
S1 200'
S3 240'
S4 240'
S5 90'
L1 90'
A6 200'
J22 /23 100'
C3 180'
C4 200'
B3-5 200'
D9 100'
C2 240'
C1 110'
K31-33 100'
C6-8 195'
G14/15 200'
H16/17 200'
H16/20 200'
F12 60'
Hotel
Ground Floor Retail
Office
Residential
3.2 m SF
Existing Scenario
4.5 m SF
Feasible Baseline
8.5 m SF
Test Scenario

Appendix

Attachment 4: Test Scenario Results

Parcel	A6	B3, B4, B5	C6,C7,C8	D9	F12	G14,G15	H16, H17, H20	S1 Sub-Parcel:	S2 Sub-Parcel:	S3 Sub-Parcel:
Use	Office	Office	Office/MF	MF	MF/Office	Office	Office/MF	Office	Hotel	MF
Acres	3.71	1.71	1.50	0.92	1.24	1.56	6.09	2.30	0.73	1.49
PUD?	Y			Y			Y		Y	
Entitlement Assumptions										
FAR	2.4	3.5	4.7	3.7	3.2	5.3	3.0	8.5	8.4	7.0
Height (Stories)	13	13	14	9	5 to 6	15	15 to 18	17 to 26	24	7 to 21
Use Mix										
Office SF	360,000	250,000	270,525	0	10,000	347,600	371,000	812,900	0	0
Hotel SF	0	0	0	0	0	0	0	0	254,500	0
Retail SF	20,000	10,000	21,045	9,000	7,000	10,000	32,000	38,000	12,000	25,000
Residential SF	0	0	13,800	152,000	155,975	0	387,000	0	0	430,750
Total SF	**380,000**	**260,000**	**305,370**	**161,000**	**172,975**	**357,600**	**790,000**	**850,900**	**266,500**	**455,750**
Residential Units										
Market Residential Units	0	0	9	152	0	0	344	0	0	430
Affordable Residential Units	0	0	0	52	150	0	86	0	0	0
Total Units	0	0	9	204	150	0	430	0	0	430
Affordable Housing Subsidy	$ -	$ -	$ -	$ 5,460,000	$ 4,050,000	$ -	$ 4,300,000	$ -	$ -	$ -
Per Unit Subsidy	$ -	$ -	$ -	$ 105,000	$ 27,000	$ -	$ 50,000	$ -	$ -	$ -
Parking										
Surface	0	0	0	0	0	0	0	0	0	0
Structure	170	520	772	222	128	476	824	919	340	287
Underground	0	0	96	0	0	238	412	459	170	143
Total Spaces	**170**	**520**	**868**	**222**	**128**	**714**	**1,236**	**1,378**	**510**	**430**
Development Cost										
Building Cost	$109 M	$86 M	$109 M	$55 M	$31 M	$123 M	$258 M	$281 M	$108 M	$143 M
Parcel Infastructure Cost	$0.0 M	$0.0 M	$0.0 M	$0.0 M	$2.6 M	$1.3 M	$4.8 M	$1.7 M	$0.5 M	$3.3 M
DistrictMaster Planning Fee	$3.8 M	$2.6 M	$3.1 M	$1.6 M	$1.7 M	$3.6 M	$7.9 M	$8.5 M	$2.7 M	$4.6 M
Financial Results										
Return on Cost	8.1%	8.1%	8.2%	7.0%	7.0%	8.1%	7.6%	8.1%	#N/A	7.0%
Building Value	$141 M	$109 M	$137 M	$71 M	$39 M	$155 M	$327 M	$354 M	$145 M	$177 M
Total Land Value	$32 M	$16 M	$12 M	$5 M	$0 M	$18 M	$33 M	$50 M	$13 M	$8 M
Total Value (Land + Building)	$173 M	$125 M	$148 M	$76 M	$39 M	$173 M	$361 M	$404 M	$158 M	$185 M
Residual Land Value / SF	**$200**	**$220**	**$180**	**$125**	**$0**	**$260**	**$125**	**$500**	**$400**	**$125**

Test Scenario Results, Continued

Parcel Use	S4 Sub-Parcel: MF	S5 Sub-Parcel: MF	J22, J23 Office	C1 Sub-Parcel: MF	C2 Sub-Parcel: Office	C3 Sub-Parcel MF	C4 Sub-Parcel MF	K31, K32, K33 MF	L1 MF	Total
Acres	1.49	0.58	0.81	1.25	2.00	1.19	1.08	1.87	2.99	48.7
PUD?										
Entitlement Assumptions										
FAR	7.0	4.5	4.6	7.1	4.1	5.7	5.1	3.3	1.3	
Height (Stories)	7 to 21	8	8	21	22 to 23	16	17	7 to 9	9	
Use Mix										
Office SF	0	0	153,000	0	325,900	0	0	0	0	2,900,925
Hotel SF	0	0	0	0	0	0	0	0	0	254,500
Retail SF	25,000	12,000	10,000	19,318	35,000	14,861	30,000	14,300	0	344,524
Residential SF	430,750	102,000	0	293,626	0	225,891	211,000	202,348	163,000	2,768,140
Total SF	**455,750**	**114,000**	**163,000**	**312,944**	**360,900**	**240,752**	**241,000**	**216,648**	**163,000**	**6,268,088**
Residential Units										
Market Residential Units	430	102	0	289	0	210	186	238	163	2,553
Affordable Residential Units	0	40	0	73	0	52	0	74	0	527
Total Units	430	142	0	362	0	262	186	312	163	3,080
Affordable Housing Subsidy	$ -	$ 1,400,000	$ -	$ 20,440,000	$ -	$ 15,600,000	$ -	$ 8,510,000	$ -	$60 M
Per Unit Subsidy	$ -	$ 35,000	$ -	$ 280,000	$ -	$ 300,000	$ -	$ 115,000	$ -	
Parking										
Surface	0	0	0	0	0	0	0	0	0	0
Structure	287	140	163	247	839	210	186	342	240	7,310
Underground	143	0	163	123	413	52	0	0	0	2,412
Total Spaces	**430**	**140**	**326**	**370**	**1,252**	**262**	**186**	**342**	**240**	**9,722**
Development Cost										
Building Cost	$143 M	$30 M	$56 M	$105 M	$142 M	$79 M	$72 M	$71 M	$52 M	$2,053 M
Parcel Infastructure Cost	$2.9 M	$0.9 M	$0.0 M	$3.4 M	$3.4 M	$1.8 M	$1.9 M	$0.0 M	$0.0 M	$28 M
DistrictMaster Planning Fee	$4.6 M	$1.1 M	$1.6 M	$3.1 M	$3.6 M	$2.4 M	$2.4 M	$2.2 M	$1.6 M	$63 M
Financial Results										
Return on Cost	7.0%	7.0%	8.0%	7.0%	8.0%	7.0%	7.0%	7.0%	7.0%	-
Building Value	$177 M	$39 M	$69 M	$135 M	$170 M	$102 M	$85 M	$93 M	$66 M	$2,593 M
Total Land Value	$8 M	$3 M	$8 M	$7 M	$8 M	$6 M	$6 M	$10 M	$0 M	$245 M
Total Value (Land + Building)	$185 M	$43 M	$78 M	$142 M	$178 M	$109 M	$91 M	$103 M	$67 M	$2,838 M
Residual Land Value / SF	**$125**	**$125**	**$240**	**$125**	**$80**	**$125**	**$130**	**$125**	**$2**	

VI. Bat Conservation

batcon.org
BAT CONSERVATION
INTERNATIONAL

Urban Design, Planning and Zoning Department

City of Austin
505 Barton Springs Road, 8th floor
Austin, TX 78704

Re: Recommendations for Statesman Waterfront Park Development

Dear Elizabeth Smith and the City of Austin,

Bat Conservation International ("BCI") is a non-profit scientific and educational organization dedicated to the study and conservation of the world's 1331 known species of bats. We work throughout North and South America, Africa, Asia and the Pacific. Our roots, however, are here in Austin where we have been headquartered since 1986 and continue to do significant work.

The history of our organization is integrally linked with that of Congress Avenue Bridge. When engineers reconstructed the Congress Avenue Bridge in 1980 they had no idea that new crevices beneath the bridge would make an ideal bat roost. By 1984, hundreds of thousands of Mexican free-tailed bats had moved into the bridge. Reacting in misguided fear many people petitioned to have the bat colony eradicated.

In 1986, our founder Merlin Tuttle brought BCI to Austin and began a vigorous public education campaign to save the bat colony. After meeting with media, community groups, schoolchildren and city leaders, BCI gradually convinced Austinites that they have little to fear and much to gain from the bridge bats. Now they have become a delight for tourists that attract millions of dollars each year for the local economy.

The ongoing protection of the Congress Avenue Bridge bat colony is a primary concern of BCI. Our education docent program, lead by BCI Education Manager Dianne Odegard, continues to educate the 140,000+ people visiting the bridge annually about the biology, behavior, value, and history of the bats roosting in the bridge.

We strongly advocate for BCI's inclusion as a stakeholder in any development application and approval process for properties near Congress Ave Bridge. We would also like to outline the following recommendations to be incorporated into the South Central Waterfront redevelopment plan:

1. BCI recommends that dark sky lighting policies and technologies be implemented in the design of the proposed buildings and park areas along the flight path of the bats, and that the tree line be retained to leave their commuting corridor intact.
2. BCI recommends that bat-compatible architectural and building standards be incorporated into the planning and execution of the development to prevent entry of bats into the structures.
3. BCI recommends the incorporation of a 50-yard buffer zone from the banks of the river to minimize the impact of increased lighting and impediments to the bat flight path.
4. BCI recommends the incorporation of a BCI kiosk and education signage into the bat park.
5. BCI recommends park maintenance that is sensitive to bat flight paths.

We have supplied additional detailed information for the above recommendations. We would also welcome the City of Austin and prospective development companies to engage with us in further discussions regarding these recommendations or other concerns regarding bats and the new development.

Yours Sincerely,

Andrew Walker
Executive Director

Conserving the world's bats and their ecosystems to ensure a healthy planet.
P.O. Box 162603, Austin, TX 78716 • Phone (512) 327-9721 Fax (512) 327-9724

Recommendations for Statesman Waterfront Park Development

batcon.org
BAT CONSERVATION INTERNATIONAL

Bat Conservation International strongly advocates for its ***inclusion as a stakeholder*** in any development application and approval process for properties near the Ann W. Richards Congress Ave. Bridge. We are more than happy to advise on the following recommendations:

Controlled lighting policies

Control lighting around the bridge.

Increased lighting levels at the bridge could adversely affect the colony by interruption of circadian rhythms. Bat Conservation International recommends implementing *dark sky initiatives*[1] in the area around the bridge. The building closest to the bridge is envisioned to be an office tower. This is preferable to residential use (with accompanying light at night and viewing balconies) but should also require lighting controls such as timers or tinted glass in order to prevent increases in ambient light at night so close to the bridge. Bat Conservation Trust (http://www.bats.org.uk/) has excellent information about the effects of outdoor lighting on bats in their "Landscape and Urban Design for Bats and Biodiversity" document, available in pdf format here: http://www.bats.org.uk/pages/landscapedesign.html.

Highlights include:

- narrow spectrum bulbs
- lights sources with minimal UV light
- lights should peak higher than 550 nm or otherwise filter UV light
- low-level lighting
- limit times lights are on to provide dark periods
- use vegetation to shield sensitive areas from lighting

Avoiding light trespass on the bridge roost would ensure that the bats know the proper time to emerge to hunt. Docents monitor light levels at time of emergence to provide baseline dark sky data.

Control lighting along the bats commuting corridor; Retain tree line along river

The bats use the riparian zone along the south edge of the river as a commuting corridor as they leave to forage. Their hugging of the trees may partly be due to the bend in the river just past the Statesman property, but is likely also to be due to the protective benefit the tree line provides from aerial predators. These trees have grown taller over the 34 years the bats have been roosting at the bridge. Many people believe the views were better when the trees were smaller and wish they could be removed or selectively pruned to enhance the view of the bats. With the proposed development, however, the trees may become more important to block the lights from the buildings and preserve the dark commuting corridor used by the bats to come and go from the city. Bat Conservation International recommends retaining the existing trees. However, if selective pruning is needed it should be done in stages to allow the bats to gradually adapt to the changes and to avoid the bats becoming disoriented by lights from the buildings[3]. We also recommend that all lighting fixtures used in the park area incorporate *dark sky initiatives*[1].

[1] Bats and Lighting, Alison Fure, The London Naturalist, No. 85, 2006

Bat-compatible building standards

To reduce the risk of future human-bat conflict, Bat Conservation International recommends that all buildings incorporate design features to prevent the entry of bats into the structures. In particular, the voids between the exterior envelope and the interior living/working spaces of the buildings need to be completely sealed to external entry. Roofing, coping, brick mold, flashings, penetrations, and overhead/loading dock doors must be properly designed, detailed, and constructed to avoid inviting wildlife to move into these voids and the interior habitable spaces.

Increased life-cycle costs of the buildings, associated with expensive bat exclusions, will occur if close attention is not paid to bat-compatible standards both at the design and construction stage of the buildings.

Riparian development buffer zones

To minimize the impact of increased lighting and impediments to the bat flight path, Bat Conservation International recommends a 50-yard buffer zone from the banks of the river. Buildings are to be situated outside this buffer zone and other structures, such as elevated walkways, should not exceed 9 feet within the buffer zone.

Incorporation into the bat park of a BCI kiosk for education and outreach

On Sept. 24, 1993 the City of Austin designated the viewing area lawn at Congress Ave. Bridge as part of the Bat Conservation Center. Then-governor Ann Richards, the Austin American-Statesman and BCI established the original Bat Conservation Center to promote public education about the importance of the Congress Avenue Bridge bat colony and its contribution to a healthy environment in Austin. Redevelopment of the area will likely modify the existing information kiosk and plaques.

Bat Conservation International recommends that the development plan include education signage and an outreach kiosk so that the organization can continue its long running public bat education program. The kiosk should incorporate a small lockable building with doors that open to allow BCI volunteers to display specimens and other education materials. BCI encourages developers to enter into a conversation with us about what this could look like in the future.

Park maintenance

When designing the layout and planting of the park, impediments to the bat flight path directly underneath the bridge need to be considered. Bat Conservation International recommends that all tall shrubby vegetation close to the bridge not exceed six feet to reduce obstacles in the emergence swoop zone.

BCI Contacts

Micaela Jemison
Director of Communication & Public Engagement
mjemison@batcon.org
Office: 703-962-6776
Cell: 703-386-6631

Bat Conservation International
4600 N. Fairfax Dr., 7th Floor
Arlington, VA
22203

Dianne Odegard
Education & Public Outreach Manager
dodegard@batcon.org
Office: 512-327-9721 Ext. 410

Bat Conservation International
PO Box 162603
Austin, TX
78716,

Inspiring a Special Waterfront: The story of revitalizing Philadelphia's riverfront and a prelude to a community conversation about the future of Lady Bird Lake's South Shore Central waterfront.

You're invited to find out about the opportunities and challenges from the leader in Philadelphia's successful visioning effort.

Public Reception

Monday, February 27, 2012

5:30 p.m.

Dougherty Arts
Center Theater

1100 Barton Springs Road

Featured speaker

6:15 p.m.

Harris Steinberg, FAIA

Founding executive director

Pennpraxis applied research

University of Pennsylvania
School of Design

More information: www.austintexas.gov/waterfront

Dougherty parking is limited. Carpools or other alternate transportation is recommended.

Hosted by AIA Austin and the City of Austin's Waterfront Planning Advisory Board and Sustainable Design Assessment Team Steering Committee.

aia austin
american institute of architects

CITY OF AUSTIN
FOUNDED 1839

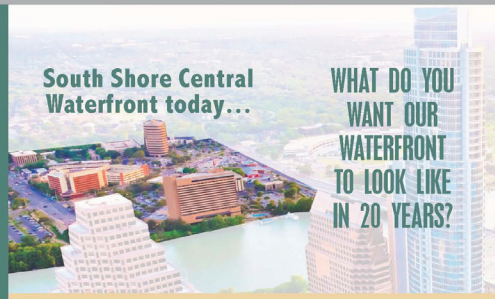
Lady Bird Lake Waterfront Special Project

COMMUNITY KICKOFF

June 4 & 6

OUR BEAUTIFUL WATERFRONT IS EVERYONE'S NEIGHBORHOOD...

The scenic waterfront along Lady Bird Lake's "South Shore Central" sub-district (along Congress Avenue and First Street)—known for Austin's iconic bat viewing—will connect to the future Boardwalk Trail at Lady Bird Lake and planned urban rail. With your help, we can begin establishing a community vision for the waterfront's future and make decisions that support the shared vision. The City of Austin is bringing together residents, property owners, urban designers, businesses, neighborhood leaders, landscape architects, green infrastructure experts, and **YOU!**



IDEA EXCHANGE: TELL US WHAT YOU THINK

IN PERSON: **Monday, June 4, 2012, 5:30-8:00 pm**
Emma S. Barrientos Mexican American Cultural Center
600 River Street, Austin, 78701

BY PHONE: **(512) 248-8748** (voicemail or text)

OR ONLINE: **speakup**austin!
speakupaustin.org

UNVEILING OF RECOMMENDATIONS FROM NATIONAL PANEL

Hear a presentation to the City by a visiting experts panel.

Wednesday, June 6, 2012, 5:30-8:00 pm
Emma S. Barrientos Mexican American Cultural Center
600 River Street, Austin, 78701

Hosted by the City of Austin Waterfront Planning Advisory Board

aia austin american institute of architects
Bury+Partners
IMAGINEAUSTIN
Congress for the New Urbanism Central Texas

Learn more about the Sustainable Design Assessment Team (SDAT) project at
AustinTexas.gov/waterfront

Sustainable Design Assessment Team (SDAT) Visit: June 4 – June 6, 2012
Topic Roundtables – Monday, June 4
Austin, TX

INFORMATION on ROUNDTABLE DISCUSSIONS

Background

Austin is one of seven communities nationwide to win a competitive grant from the American Institute of Architects (AIA) for technical assistance to provide an independent assessment of challenges and opportunities in the South Shore Central district of Lady Bird Lake, and to recommend strategies for enhancing public access to the lake, and to promote excellence in urban design with future development. The grant is part of the AIA's Sustainable Design Assessment Team (SDAT) Program which focuses on the importance of developing sustainable communities through design. The SDAT will bring a national team of architects, planners, green infrastructure experts, economists and other professionals to Austin for three days, June 4 – June 6, to work with the local community to provide their independent assessment and make recommendations.

An Invitation to Topic Roundtable Discussions

Topic Roundtable Discussions will take place during the afternoon of June 4th at various locations in the South Shore Central district. Roundtables are opportunities for community and neighborhood leaders, residents, nonprofit and civic groups, businesses, property owners, public officials, and city staff to meet with the SDAT to inform them on Austin issues, concerns, and initiatives, and to explore ideas and opportunities to improve sustainability in the South Shore Central district.

Session	Topics	Location	SDAT members
*Monday, June 4th: **Early afternoon sessions – 2:00 – 3:15***			
A	Transportation/streetscapes/trails/bikes/ open space/green infrastructure	**Statesman** – 305 S. Congress, 1st floor conference room	Hough-Beck, Benz, Bower, Reeves
B	Economic development/ housing/affordability/urban design	**Town Lake Center –** 721 Barton Springs Rd., 1st floor conference room	Hinshaw, Steinberg, Farkas, Feiden
*Monday, June 4th: **Late afternoon sessions – 3:45 – 5:00***			
C	Transportation/streetscapes/trails/bikes/ open space/green infrastructure	**Statesman** (see above)	Hough-Beck, Benz, Bower, Reeves
D	Economic development/ housing/affordability/urban design	**Town Lake Center** (see above)	Hinshaw, Farkas, Feiden
E	Public process post SDAT	**One Texas Center -** 505 Barton Springs Rd., 3rd floor conference room	Steinberg

Space is limited. Pre-registration is requested. For more information, or to participate, contact:
Dee Dee Quinnelly – Kathryn.quinnelly@austintexas.gov 974-2976

THE AMERICAN INSTITUTE OF ARCHITECTS

To learn more about the Austin South Shore Central SDAT, visit: www.austintexas.gov/waterfront

Imagine what the south shore of Lady Bird Lake could be.

Presentation of "what if" scenarios by John Fregonese, a national expert on sustainable development.

www.austintexas.gov/waterfront

May 13, 6:00—8:30 pm

Hyatt Regency Austin, 208 Barton Springs Road, Hill Country Ballroom

Parking Options: On-site $5 (Limited Availability)
One Texas Center (Free) - 505 Barton Springs Road

This event is also a regular meeting of the Waterfront Planning Advisory Board.

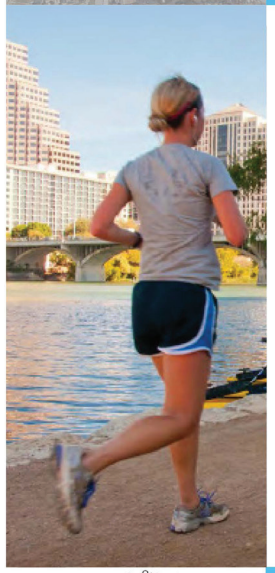
SUSTAINABLE PLACES Project

Waterfront **Talk**about

Imagining alternative futures for the South Central Waterfront

Tuesday, January 21st
7-9 p.m. | Doors at 6:30 p.m.
Stateside at the Paramount | 719 Congress Ave.

Light refreshments will be served.



Speakers

Harris Steinberg, FAIA | Executive Director of PennPraxis | Philadelphia

John Fregonese | President of Fregonese Associates | Portland, OR

Steinberg and Fregonese, nationally renowned experts in urban planning and design, have both completed recent studies that explore the challenges and opportunities for the future of Austin's South Central Waterfront. They will present highlights from their studies as well as showcase award-winning examples of remarkable waterfront plans from elsewhere.

After their presentation, local architect/urban designer Jana McCann FAIA, past president of AIA Austin, will moderate a panel discussion with questions from the audience.

South Central Waterfront Plan Initiative

The South Central Waterfront Plan Initiative will establish a vision and recommendations to guide public and private redevelopment over the next 20 plus years. The plan will help ensure that the South Central Waterfront will grow to create a beautiful public realm that supports a lively, attractive pedestrian environment, creates great public spaces, and enhances connections to and along the waterfront.

- Bus directions
- Bicycle directions
- On-street parking free after 6 p.m.
- Off-street $6 at One American Center garage (600 Congress).

2014 "Waterfront Talkabouts" Speaker Series

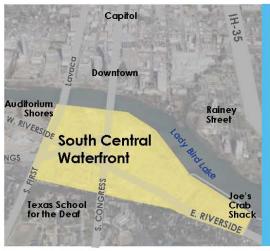
www.austintexas.gov/waterfront

A series of free public talks by experts to highlight best practices and inspirational examples of waterfront developments. The Waterfront Talkabout will enrich community conversations around the South Central Waterfront and are part of the Imagine Austin Speaker Series. The Waterfront Talkabout series is hosted by the City of Austin's Planning & Development Review and Economic Development Departments.

IMAGINEAUSTIN SPEAKER SERIES

aia austin american institute of architects

Appendix

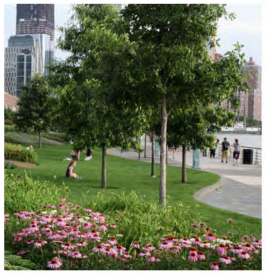


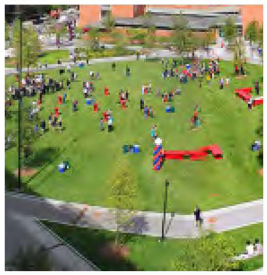
Waterfront Talkabout 2

Green Spaces, Urban Places

Wednesday, February 12th
7-9 pm | Doors at 6:30 pm
St. David's Episcopal Church | 301 East 8th Street

Light refreshments will be served.





Green Spaces, Urban Places

Dean Almy, AIA | Director of Urban Design Program | UT Austin

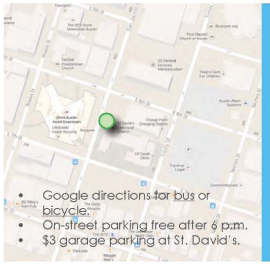
Daniel Woodroffe, RLA | President of dwg.

Architect Almy and landscape architect Woodroffe, both past members of the Waterfront Planning Advisory Board, are leaders in urban design. Almy led a University of Texas Urban Design Lab in 2013 to study potential futures for the South Central Waterfront, and is the author of an article in the current issue of *Texas Architect* on Austin's waterfront. Woodroffe's firm, dwg., is the local partner landscape architect crafting the Waller Creek Vision, and Woodroffe is the current president of the Austin Parks Foundation.

The speakers will present design ideas for green spaces in and along Austin's South Central Waterfront, and inspirational designs from elsewhere, to highlight how extraordinary and intimate urban waterfront parks, coupled with green infrastructure, can enrich the urban landscape.

South Central Waterfront Plan Initiative

will establish a vision and recommendations to guide public and private redevelopment over the next 20 plus years. The plan will help ensure that the South Central Waterfront will grow to create a beautiful public realm that supports a lively, attractive pedestrian environment, creates great public spaces, and enhances connections to and along the waterfront.



- Google directions for bus or bicycle.
- On-street parking free after 6 p.m.
- $3 garage parking at St. David's.

2014 "Waterfront Talkabouts" Speaker Series

www.austintexas.gov/waterfront

A series of free public talks by experts to highlight best practices and inspirational examples of waterfront developments. The Waterfront Talkabout will enrich community conversations around the South Central Waterfront and are part of the Imagine Austin Speaker Series. The Waterfront Talkabout series is hosted by the City of Austin's Planning & Development Review and Economic Development Departments.

IMAGINEAUSTIN SPEAKER SERIES

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Waterfront Talkabout 3

Dollars & Sense: Smart Strategies to Fund Our Future

Monday, March 24th
7-9 pm | Doors at 6:30 pm
St. David's Episcopal Church | 301 East 8th Street

Light refreshments will be served.

Photo credit: Design Workshop

Dollars & Sense: Smart Strategies to Fund Our Future

Dr. Abe Farkas | Director of Development Services at ECONorthwest | Portland, OR

Abe is an expert in strategic planning and crafting urban development partnerships nationwide. He served on Austin's 2012 AIA SDAT.

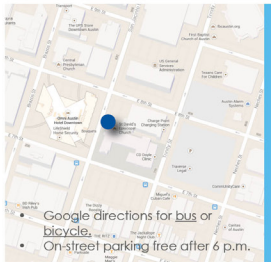
Rebecca Leonard | President of Design Workshop | Austin, TX

Rebecca's firm, Design Workshop, has won regional and national awards for projects which merge quality place-making design with practical approaches for implementation and funding.

Given market conditions and zoning already in place, over $1 billion dollars of private redevelopment is heading to the South Central Waterfront in the next several years; in fact, it's rapidly underway.

To complement this tremendous private investment, Austin needs a plan and viable strategy to build and fund a public realm that increases the quality and amount of: public access & connections to the waterfront, and public open space & streetscapes. In addition, it needs to integrate landscaping for beauty and environmental benefits, and to realize community values like affordable housing.

This Talkabout will explore creative approaches to financing and implementing a community vision and will highlight examples of how other cities have worked in tandem with private redevelopment to fund their futures.



- Google directions for bus or bicycle.
- On-street parking free after 6 p.m.

2014 "Waterfront Talkabouts" Speaker Series

www.austintexas.gov/waterfront

The City of Austin launched the South Central Waterfront Plan Initiative to guide private redevelopment and accompanying public investment. The Waterfront Talkabouts are a part of the Imagine Austin Speaker Series. The Talkabouts will enrich community conversations around the South Central Waterfront Plan Initiative and feature experts who will highlight best practices and inspirational examples of waterfront development. Waterfront Talkabouts are hosted by the City of Austin's Planning & Development Review and Economic Development Departments.

IMAGINEAUSTIN SPEAKER SERIES

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AUSTIN FOUNDATION FOR ARCHITECTURE

Explore the South Central Waterfront

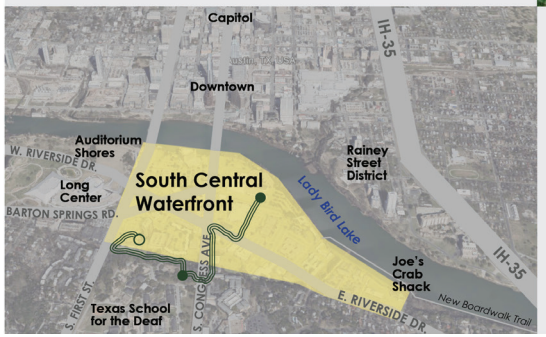
Waterfront Walkabout 2

Imagining Future Walking Connections

Saturday April 5th
10am-12 noon
505 Barton Springs Rd.

Join us for a walk focusing on connections in the South Central Waterfront. We'll walk along E. Bouldin Creek and then to the waterfront. We'll stop twice to talk about future walking paths in the area. See our new route on the map below.

Meet in lobby of One Texas Center (Barton Springs Rd. & S. First St.) Light refreshments will be provided. Bring a refillable water bottle! Please dress for the weather and be prepared to walk 1.5 miles on uneven terrain. Dog and family friendly!



Parents, bring your cameras! The Texas School for the Deaf's cast for Cinderella will have a photo opp for kids!

Sponsored by the City of Austin's Planning & Development Review and Economic Departments.

Learn more about the South Central Waterfront at austintexas.gov/waterfront

The waterfront's changing.

Help us get ready...

April 24-28 ▪ Texas School for the Deaf ▪ 1102 S. Congress Avenue

The South Central Waterfront Initiative invites everyone in Austin to participate in establishing a vision to guide public and private development over the next 20 years...

Thursday
April 24
7-9 pm

Presentation & Vision Workshop

Give your input on emerging principles and provide your ideas to guide a full weekend of work by architects, designers, economists, and engineers conceptualizing and illustrating the possibilities for this area.

speakupaustin!
POST ★ VOTE ★ JOIN
speakupaustin.org

Saturday
April 26
2-5 pm

Open Studio & Pin-Up Review of Work-in-Progress

See in-process design sketches, drawings and illustrations that envision what the future of the South Central Waterfront might look like! Drop in any time between 2-5 p.m. Share your thoughts on design options and the emerging vision. **Children will build their own vision with Box City. Live music and free refreshments!**

www.aiaaustin.org/content/two-box-city-events

Monday
April 28
7-9 pm

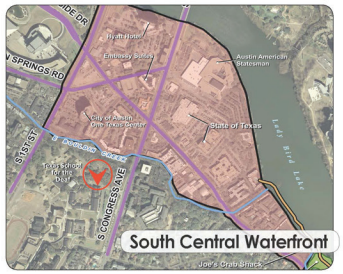
Review Forum: A Vision Plan for the Waterfront

The design team will present a conceptual vision plan for the South Central Waterfront. The Vision will set forth a framework for coordinating public infrastructure investments with private redevelopment, crafting economic development policy, and creating incentives and pathways to achieving great public spaces, integration of landscaping for beauty and environmental benefit, and affordable housing.

austintexas.gov/waterfront

With Gratitude:

Hosted by the City of Austin Planning & Development Review and Economic Development departments.



Waterfront Talkabout 4

Wednesday, May 6th 2015 | 7 pm | Doors at 6:30 pm

Mexican American Cultural Center | 600 River St.

Parking is free in MACC lot

Principles for Remaking the Urban Waterfront

Alex Krieger, FAIA, an internationally renowned architect, urban designer, Harvard professor, writer, and a global expert on riverfront planning, will speak on the principles for creating vibrant, beautiful, and welcoming waterfronts. Krieger's talk will draw on his considerable contributions to waterfront design and planning which include his acclaimed work in Boston, Louisville, Washington DC, Pittsburgh, Detroit, Montreal, and the renovation of Shanghai's riverfront Bund.

Mr. Krieger is a principal at NBBJ, a global architecture and planning firm, and a professor at the Harvard Graduate School of Design, where he has served as the head of the Urban Design Program. His many publications include *Remaking the Urban Waterfront* and *10 Principles for Waterfront Development*. He is a frequent advisor to mayors and their planning departments, has served as director for the National Endowment for the Arts' Mayors' Institute on City Design, lectures frequently at conferences and universities in the US and abroad, and was appointed to the US Commission of Fine Arts by President Obama.

CITY OF AUSTIN FOUNDED 1839

DOWNTOWN AUSTIN ALLIANCE

Texas Society of Architects

ULI Urban Land Institute Austin

South Central Waterfront (SCW) Initiative

The SCW Initiative will create designs, policies, and recommendations to guide public and private investments over the next 20 years. To enrich the community conversation, the Waterfront Talkabout speaker series feature experts who will highlight best practices and inspirational examples of waterfront planning and development.

www.austintexas.gov/waterfront

Waterfront Talkabout 5

Wednesday, July 8th 2015 | 7 pm | Doors at 6:30 pm

Mexican American Cultural Center | 600 River St.

Parking is free in MACC lot

Designing Urban Landscapes For People and Nature

Scott Cataffa, a Principal at CMG Landscape Architecture, a nationally awarded design firm based in San Francisco, will speak on landscape as a framing device for new urban development. He will show examples of how green infrastructure enriches the urban landscape and highlight an innovative funding model for building and maintaining green infrastructure. Come see ways to maximize the benefit of the public realm for ecology, sustainability, economic development, and civic life.

Mr. Cataffa leads a range of projects for CMG Landscape Architecture, from planning and site design to cultural landscape and preservation research. As a designer, he emphasizes social and ecological connectivity and an understanding of place through the lens of past and present culture. As a key player in developing the nation's first Green Benefits District for San Francisco's Dogpatch neighborhood, Scott is an expert in sustainable urban design.

The Environmental Protection Agency, through the Greening of America's Capitals award, has hired CMG to work with Austin to help design the green infrastructure network for the South Central Waterfront.

CITY OF AUSTIN FOUNDED 1839

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

South Central Waterfront (SCW) Initiative

The SCW Initiative envisions how the area could transform with green infrastructure: a connected network of tree-lined streets, urban trails, parks, and open spaces that integrates landscape, public art, and technologies to make beautiful people-oriented places, alongside environmental benefits, such as fresh air and water, habitat creation, and climate mitigation.

www.austintexas.gov/waterfront

You are invited to the

South Central Waterfront Design Workshop

Come work with designers in planning for great public spaces in the South Central Waterfront (SCW) area of Lady Bird Lake.

Kickoff Workshop & Open House
Tuesday, Sept. 1, 6:30 - 8:30 p.m.
Share your input on conceptual designs for five key locations in the project area.

Wrap-up Workshop & Open House
Thursday, Sept. 3, 6:30 - 8:30 p.m.
The design team will share the latest design concepts and gather community input.

The Design Workshops will be held at the Texas School for the Deaf, 1102 S. Congress Ave., Austin. Access the campus through the entrance on Elizabeth Street.

The events are family-friendly and will feature a **petting zoo**, **face painting**, and **ice cream**!

For more information, visit www.austintexas.gov/waterfront

Waterfront Talkabout 6

Monday, May 23rd 2016 | 6 pm | Doors at 5:30 pm

Texas School for the Deaf | 1102 S. Congress Ave.

A Vision Framework Plan for the South Central Waterfront

The **SCW Vision Framework Plan** is the result of a multiyear effort of planning and community engagement. The Plan sets aspirations and recommendations to help ensure that expanded park spaces, public gathering places, green streets, and affordable housing are central to the future redevelopment of this rapidly changing area. The City Council will consider adopting the Plan at a June 9th public meeting.

Learn about the SCW Vision Framework Plan, and hear from key consultants who have contributed to the making of the plan:

Margaret Robinson PLA, co-founder and Principal of Asakura Robinson, an award-winning landscape architecture, planning, and urban design firm.

Asakura Robinson has helped craft the physical framework for the SCW Plan to create a great public realm for the district.

Dr. Abe Farkas | Director of Development Services at ECONorthwest | Portland, OR.

Abe is an expert in finance, real estate development, and crafting urban development partnerships nationwide. His firm has helped create the financial framework for the SCW Plan. The financial framework sets strategies to fund the vision of a great public realm and support creation of potentially hundreds of affordable housing units.

www.austintexas.gov/waterfront

Appendix

Spring 2016 Austin, Texas